



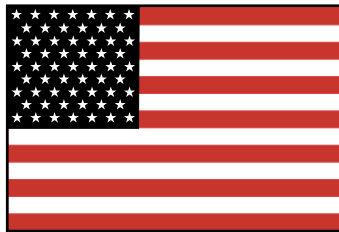
U.S. Department
of Transportation
**Federal Aviation
Administration**

AFS-600

Regulatory Support Division

ADVISORY CIRCULAR 43-16A

AVIATION MAINTENANCE ALERTS



ALERT
NUMBER
280



NOVEMBER
2001

CONTENTS

AIRPLANES

FLAMMABLE FLUID LINES, BEHIND THE INSTRUMENT PANEL ON SMALL, SINGLE-ENGINE AND MULTIENGINE AIRPLANES	1
BEECH	2
CESSNA	6
CIRRUS	9
GLOBE SWIFT	10
PIPER	11

HELICOPTERS

BELL	14
EUROCOPTER	14

POWERPLANTS AND PROPELLERS

HARTZELL	15
TEXTRON LYCOMING	16

AMATEUR, EXPERIMENTAL, AND SPORT AIRCRAFT

AVIAT	16
LANCAIR	17

ACCESSORIES

EMERGENCY LOCATOR TRANSMITTERS (ELT)	17
--	----

AIR NOTES

ALL AIRWORTHINESS DIRECTIVES ARE ON THE WEB	18
SUBSCRIPTIONS	18
ELECTRONIC VERSION OF MALFUNCTION OR DEFECT REPORT	18
SERVICE DIFFICULTY REPORTING PROGRAM	19
ADDRESS CHANGES	20
IF YOU WANT TO CONTACT US	20
AVIATION SERVICE DIFFICULTY REPORTS	21

**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590**

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provide a common communication channel through which the aviation community can economically interchange service experience and thereby cooperate in the improvement of aeronautical product durability, reliability, and safety. This publication is prepared from information submitted by those who operate and maintain civil aeronautical products. The contents include items that have been reported as significant, but which have not been evaluated fully by the time the material went to press. As additional facts such as cause and corrective action are identified, the data will be published in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported via Malfunction or Defect Reports. Your comments and suggestions for improvement are always welcome. Send to: FAA; ATTN: Designee Standardization Branch (AFS-640); P.O. Box 25082; Oklahoma City, OK 73125-5029.

AIRPLANES

**FLAMMABLE FLUID LINES, BEHIND THE INSTRUMENT PANEL
ON SMALL, SINGLE-ENGINE AND MULTIENGINE AIRPLANES**

This article is being published at the request of the FAA, Aircraft Certification Office, ACE-115W, in Wichita, Kansas. *(This article is printed as it was received from ACE-115W.)*

The FAA has received several Safety Recommendations which are applicable to many small, single-engine and multiengine piston-powered aircraft. These Safety Recommendations were written as a result of accidents and incidents related to leakage of flammable fluid lines behind the instrument panel. One of the reports was applicable to an older model of a current production, multiengine aircraft that resulted in an off-airport fatal accident. Several other reports were received on older models of either out of production or current production models of single-engine aircraft that experienced failure or near failure of flammable fluid lines behind the instrument panel.

Currently 14 CFR part 23 rules require a means to minimize the ignition and resultant hazard of ignition associated with the installation of flammable fluid systems. However, many older models that may, at this time, be in or out of production do not have to comply with the current 14 CFR part 23 rules, applicable to flammable fluid fire protection. All of these earlier certificated aircraft are susceptible to the conditions that have been explained in adverse service reports.

The FAA has recommended that the manufacturers of the suspect small aircraft issue service information concerning this subject. The service information should be in the form of maintenance manual revisions, service bulletins/letters, etc., which provide detailed inspection information applicable to flammable fluid systems as well as flammable fluid lines behind the instrument panels of their respective model aircraft. As an example, Cessna Aircraft Company is currently preparing manual revisions covering this subject and may have some of the material available at the time this advisory is published. However, this expanded information on flammable fluid line fire protection, has been determined to be applicable to the entire fleet of older small aircraft, both single-engine and multiengine. Therefore, the FAA is considering other advisory methods, applicable to flammable fluid lines behind the instrument panel, to make the aviation public aware of the seriousness of this problem. This is similar to the methods used previously to provide information concerning engine controls on older and current production aircraft that may be manufactured to earlier certification rules. The FAA also noted that on older small multiengine aircraft, corrosion and chafing, of these

lines may be prevalent under the floor panels. The FAA considers this an aging aircraft issue and urges maintenance technicians to closely inspect these fluid lines, both oil and fuel, for condition and security.

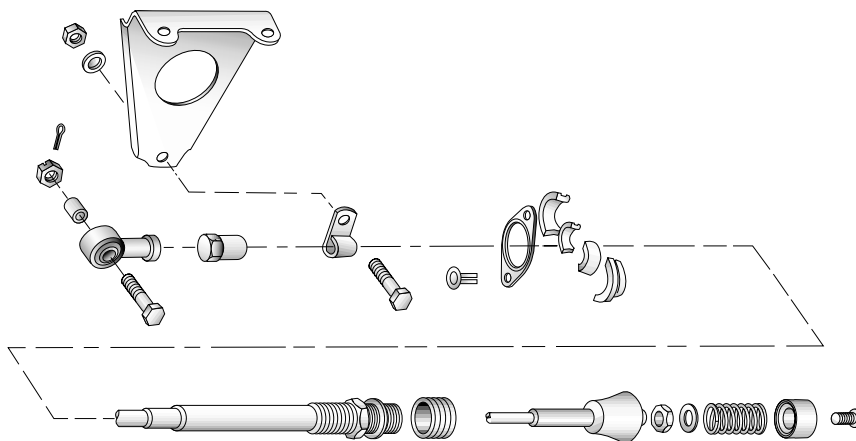
It is recommended that the existing service information available to maintain the small, single-engine and multiengine aircraft equipped with flammable fluid lines behind the instrument panel, be carefully reviewed and that additional, currently applicable, information be prepared and utilized to verify airworthiness of the aircraft configured with these systems. Also, maintenance technicians are encouraged to pay close attention to flammable fluid lines, especially those located inside the aircraft during inspections and maintenance. These lines should be checked for chafing, security, leaking, corrosion, cracking, and general condition. In addition, the life limit of flexible fluid lines should be strictly complied with.

BEECH

Beech; Model E33A; Bonanza; Engine Throttle Interference; ATA 7603

The pilot reported that during flight, the throttle control assembly (P/N 35-944046-5) jammed when it was moved. He was able to gain enough control to land the aircraft safely.

A technician found the throttle control knob button (P/N 35-944035-1) was misaligned causing the throttle interference. The screw (P/N NAS387-832-8P), used to attach the button to the throttle knob, was loose and allowed the button to become misaligned and jam when the throttle was moved. The screw had backed out approximately eight turns. (Refer to the illustration.)



This rather small screw being loose could have resulted in a catastrophic aircraft accident, and technicians and pilots should pay extra attention to the security of all hardware.

Part total time not reported.

Beech; Model F-33A; Bonanza; Defective Wing Flap Drive Cable; ATA 2750

While complying with the recommendations of Safety Communiqué Number 182, a technician found the left wing flap drive cable had a suspect date of manufacturer.

The technician ordered and received a new left wing flap drive cable (P/N 12517Y-63-31). The new cable bore a date of manufacturer of "03-2001." He installed the new cable, and it failed on the first

activation during an operational test. The cable separated at the drive end of the actuator. After removing the cable, he returned it to the manufacturer for analysis.

Part total time-0 hours.

Beech; Model C55; Baron; Wing Spar Damage; ATA 5711

While conducting a scheduled inspection, the technician discovered a crack on the top of the left wing.

The crack was a result of damage to the lower forward wing spar. Excessive looseness and movement of the wing's leading edge evidently caused the spar damage. The looseness was a result of excessive wear on the hinge stock and pins that are used for attachment of the leading edge.

This area deserves close scrutiny at every opportunity.

Part total time not reported.

Beech; Model 76; Duchess; Engine Mount Structural Defects; ATA 5400

While complying with the requirements of a scheduled inspection, a technician discovered defects on the left and right engine mount channels.

The channels (P/N 105-980000-21) were broken completely through just above the nut plate holes. The submitter speculated the "counter-rotating engines" and/or an unreported hard landing might have caused this damage.

Everyone involved in aviation should be conscientious in reporting any defect or possible defect or condition that may lead to a defect to the technicians charged with maintaining the aircraft in a condition for safe operation.

Part total time not reported.

Beech; Model C90; King Air; Fuel Quantity Defect; ATA 2841

After returning from a flight, the pilot reported that the left fuel quantity indicator was "unreliable" and appeared to read low.

A technician removed the fuel quantity indicator (P/N 100-380006-47) and replaced it with a unit overhauled by a certificated repair station. The overhauled indicator was calibrated in accordance with current technical data. After the next flight, a repeat discrepancy was reported. The technician swapped the left and right indicators and discovered the problem was in the indicator. The technician replaced the unit with an overhauled unit. After calibrating the overhauled unit, he approved the aircraft for return to service. After returning from the first flight, the crew reported the same discrepancy.

The aircraft was given a scheduled inspection, and the fuel quantity system was investigated further. After the technician discovered several corroded electrical grounding points, he cleaned and recalibrated the system.

After the scheduled inspection, the fuel quantity discrepancy was again reported following the second flight. Again, it was determined the indicator was defective. The technician discovered that all of the failed fuel quantity indicators were overhauled by the same repair station at approximately the same time

and were sent to them because of the same defect previously reported. The technician contacted his supplier and asked them for another fuel quantity indicator from a different repair station. When the technician received the indicator, it was installed, calibrated, and functioned properly.

This report brings to light several problems and reminds us to be vigilant when troubleshooting discrepancies. Just because a part is received with a “serviceable tag” is not a guarantee that the part is airworthy. However, it does let us know the facility that accomplished the repair. In this case, perhaps a bench test of the newly overhauled indicators would have detected the defect before installation on the aircraft.

Part total time not reported.

Beech; Model 95-B55; Baron; Defective Wing Attachment Hardware; ATA 5740

While preparing for an annual inspection, the technician conducted a review of the aircraft maintenance records and discovered the wing attachment hardware was due for removal and inspection.

The technician and owner decided to replace the wing attachment hardware with new bolts and nuts received from Beech. In accordance with current technical data, the new hardware was sent to a nondestructive inspection (NDI) repair station. However, the manufacturer should have inspected it via NDI prior to shipment.

The repair station conducted a magnetic particle inspection procedure and discovered that two of the nuts had a “rough inside surface,” and there were linear crack indications in the threaded area. After the technician discussed this problem with Beech, he returned the nuts for further inspection and evaluation.

The importance of not taking for granted the airworthiness of these critical parts cannot be overstressed.

Part total time-0 hours.

Beech; Model 95-B55; Baron; Induction Airbox Damage; ATA 7160

During an annual inspection, the technician discovered the right engine induction airbox was seriously damaged.

The induction system and airbox (P/N 96-919100-16) displayed severe wear and numerous cracks. The technician speculated metal fatigue and exposure to excessive vibration caused the damage. Approximately 69 hours prior to this finding, the airbox assembly was repaired due to the same type of damage.

Technicians are advised to give the airbox assembly extra attention during scheduled inspections and maintenance in the area. Many different aircraft, using a similar induction system, are also susceptible to this type of damage and deserve extra attention.

Part total time-2,357 hours.

Beech; Model 200; King Air; Wing Flap Defect; ATA 2752

After returning from a flight, the pilot reported the right flap was “bouncing” in the airstream when he extended the right flap.

A technician found the right outboard flap, center shaft of the actuator (P/N 50-521222-4) was cracked over the entire length. This allowed the flaps to “bounce” similar to what might be produced by bad or severely worn flap rollers.

The submitter recommended inspecting the top and bottom of the flap actuator center shaft closely during scheduled inspections.

Part total time-1,819 hours.

Beech; Model 400A; Beechjet; Tire Failure; ATA 3246

The pilot reported that during a landing, the right main gear tire went flat. He was able to control and stop the aircraft on the runway.

During an investigation, a technician discovered that one of the wheel half tie bolts (P/N GYS186-20) had broken and was missing. He speculated the missing bolt caused unseating of the wheel half sealing “O” ring and the loss of air pressure. The wheel half tie bolts were inspected via a magnaflux inspection procedure 14 operating hours prior to this occurrence, and no defects were found at that time.

The submitter recommended replacing all wheel half tie bolts and nuts during each wheel overhaul.

Part total time-1,000 hours.

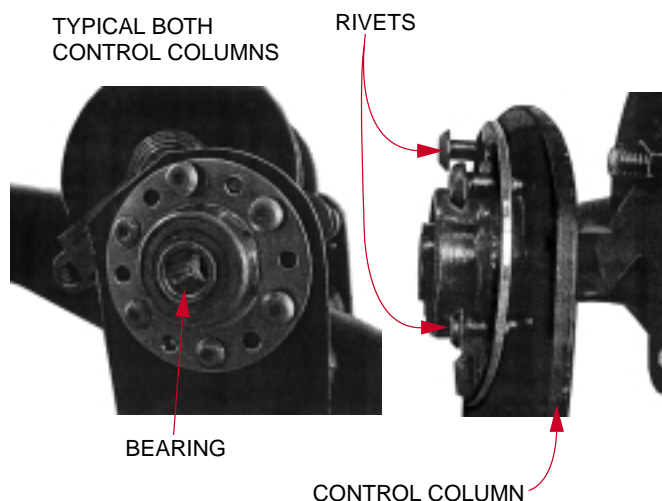
Beech; Model 1900D; Airliner; Flight Control Defect; ATA 2730

After a flight, the pilot reported the elevator control was not responsive.

A technician discovered that excessive movement of the control column was required before the elevator moved. Further inspection revealed the control column assembly (P/N 100-524119-55) lower bearing (P/N MS20218-2) was loose, and the attachment rivets (P/N NAS1738B4) were worn and backed out. Similar defects were found on both control columns. (Refer to the illustration.)

The submitter suggested that technicians give this area extra attention during scheduled inspections.

Part total time-1,233 hours.



CESSNA**Cessna; Model 152; Loss of Engine Power; ATA 7220**

While doing touch-and-go landings, the pilot applied carburetor heat and lost engine power. The engine performance did not change when the carburetor heat control was reversed. He made a safe, full-stop landing and turned the aircraft over to a maintenance shop.

A technician removed the carburetor and found the “starter lubrication” decal lodged in the venturi. This severely restricted the airflow to the engine and produced an extremely rich mixture. After removing the decal and conducting a thorough inspection of the carburetor, the operational test produced normal operating parameters.

The submitter recommended removing the starter lubrication decal prior to installation of the starter. He also suggested the starter manufacturer pursue methods to affix the decal in a more permanent manner.

Part total time-43 hours.

Cessna; Model 172N; Skyhawk; Serious Wing Structural Damage; ATA 5710

While conducting a scheduled inspection, the inspector noticed that a large number of rivet heads were broken and missing under the right wing leading edge skin at the forward spar.

The wing was removed and taken to a structural repair shop for evaluation and repair. The wing was disassembled and the technicians found severe corrosion over much of the wing structure including skins, spars, ribs, and stringers. Since four nose ribs were corroded completely through, they were replaced. He also replaced all the skins. After removing the corrosion on the remaining components, he cleaned and treated them for corrosion, and found the components to be serviceable.

The aircraft owner stated, “These components were not that bad a year ago.” The submitter stated that aircraft based in corrosion-prone area should receive rigorous inspections. He also suggested conducting preventive maintenance and regular washing of aircraft flown in corrosion-prone areas.

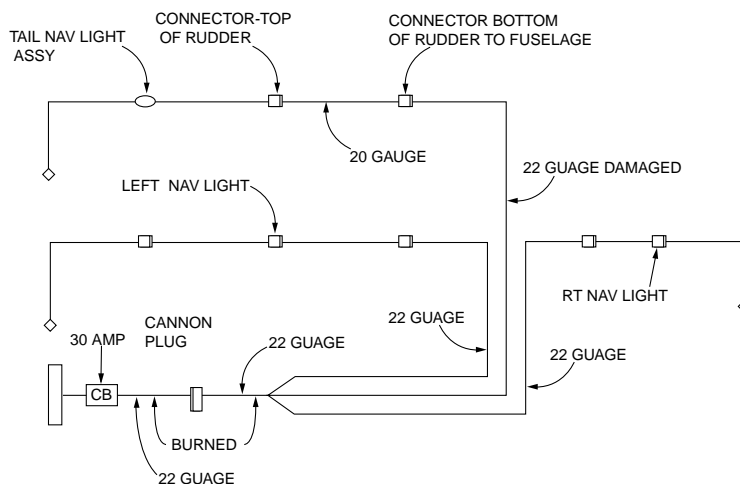
Part total time-7,178 hours.

Cessna; Model 172R; Skyhawk; Defective Electrical Wiring; ATA 2400

After a flight, the pilot reported he lost electrical power to approximately one-half of the avionics buss and experienced smoke and a foul odor in the cockpit.

A technician inspected the aircraft and found a 22-gauge wire (2H1002), was burned from the navigation light circuit breaker switch to pin 11 in connector JC001 and from there to pin 1 in connector JV001. The red wire (6-inch pigtail) from the tail navigation light housing, running to the connector (JV001), was shorted to a nut plate used to attach the rudder tip. However, other than a small “pin-sized burn mark,” the wire did not display evidence of overheating.

Several other wires (2H1005, 2H1009, and 2H1008) were severely damaged. All three wires from the navigation lights feed into a 2-foot length of 22-gauge wire that is connected to the 5-amp circuit breaker switch. (Refer to the illustration.) Most of the wire to the tail navigation light was damaged; however, the forward portion of the wire was burned down to the bare conductor. This part of the wire melted into adjacent wires in the bundle causing an electrical overload that opened the 30-amp navigation light system circuit breaker.



The submitter offered evidence indicating the electrical system, for the navigation light circuit, required between 18-gauge wire and 20-gauge wire instead of 22-gauge wire. It is believed the inadequate wire size contributed to, or caused, this failure. It was recommended that the manufacturer consider a redesign of the navigation light circuit to alleviate recurrence of this problem.

Part total time not reported.

Cessna; Model 172S; Skyhawk; Defective Landing Gear; ATA 3211

The pilot reported a “popping” noise coming from the left brake when the brakes were applied. He taxied back to the parking ramp and summoned maintenance personnel.

A technician inspected the landing gear system and found the left inboard main gear attachment fitting hardware was loose. After removing the gear, he discovered the bolts and the holes in the gear were severely worn.

The submitter did not offer a cause for this defect; however, it is possible the gear attachment hardware was not properly torqued during the last installation. This aircraft is used in a training environment. The landing gear leg and attachment fitting were damaged beyond limits and required replacement. He returned the old parts to Cessna for evaluation.

Part total time-1,345 hours.

Cessna; Model 177B; Cardinal; Flight Control Interference; ATA 2701

The aircraft owner/pilot reported that during an attempted takeoff, he could not attain full aft movement of the flight control yoke. He aborted the takeoff and was very close to the end of the runway when he stopped the aircraft.

The technician discovered that the right side of the panel mount tray for the transponder (Narco 150) had dropped approximately .25 inch and was restricting the aft movement of the control yoke. This restriction prevented rotation of the aircraft for takeoff. He added an additional support to the back of the transponder tray to provide proper support and security.

The submitter speculated the previous transponder installer failed to recognize the possibility of the tray slipping down and interfering with elevator travel. He suggested that maintenance personnel be aware of this condition and inspect the transponder tray installation for clearance during scheduled inspections.

Aircraft total time-3,397 hours.

Cessna; Model R182; Skylane; Engine Starter Defect; ATA 8010

When the pilot attempted to start the engine prior to flight, the starter failed.

A technician inspected the aircraft shortly after the starter failed and found the starter was still extremely hot. He performed an electrical test and discovered the starter had failed internally. After disassembly, he discovered the starter contactor (P/N S-1577A1) had failed in the closed position and caused the starter to overheat and fail. The contactor points were welded closed.

The submitter stated this was the second similar failure he has seen on relatively new like aircraft.

Part total time-139 hours.

Cessna; Model U-206G; Skywagon; Communication Interference; ATA 2420

After returning from a flight, the pilot reported excessive noise in the headset.

A technician discovered the headset noise occurred when the alternator (P/N 9910592-1) was "online." There was no noise when the alternator was "offline." When the alternator was "online," the "whiskey" compass deviation was approximately 20 degrees. He inspected and tested the electrical system wiring, grounds, bonding, and shielding without finding the cause of this defect.

The technician installed three alternators attempting to solve the problem without success. After he installed an alternate alternator (P/N E3FF10300AA), the radio interference and the compass deviation were eliminated.

Part total time-187 hours.

Cessna; Model 402B; Businessliner; Split Flap Condition; ATA 2750

The pilot stated that during a short final approach, he experienced a "split flap" condition. He was able to land the aircraft safely.

During a maintenance inspection, a technician discovered the left wing flap extension cable (P/N 50-00008-3CR) was broken. When the cable broke, it allowed the left flap to retract while the right flap remained down.

The submitter speculated the cable failed because the cable strands were “work hardened.”

Part total time-12,101 hours.

Cessna; Model 414A; Chancellor; Wheel Brake Defect; ATA 3242

While taxiing for takeoff, the pilot discovered the right wheel brake was not effective. He taxied back to the parking ramp and summoned maintenance personnel.

A technician discovered the line (P/N 5100106-159) running to the right brake was leaking. The brake line is routed under the heater duct and had chafed against the heater duct until the line wall thickness was penetrated.

The location of this defect makes proper inspection especially difficult. However, the submitter suggested that technicians expend the extra effort required to detect chafing conditions during scheduled inspections.

Part total time-4,094 hours.

Cessna; Model 550; Citation; Smoke in the Cockpit; ATA 3350

As the flightcrew taxied to the runway for takeoff, they detected a burning odor followed by visible smoke. The smoke was coming from the cockpit headliner area. The flightcrew notified ground control, shut down the engine, and evacuated the aircraft.

Maintenance personnel towed the aircraft to a hangar. A technician determined the smoke was caused by the emergency lighting battery pack (P/N 24621-3). He speculated a diode failure allowed the battery pack to overheat.

Part total time-5,675 hours.

CIRRUS

Cirrus; Model SR-22; Fuel System Defect; ATA 2820

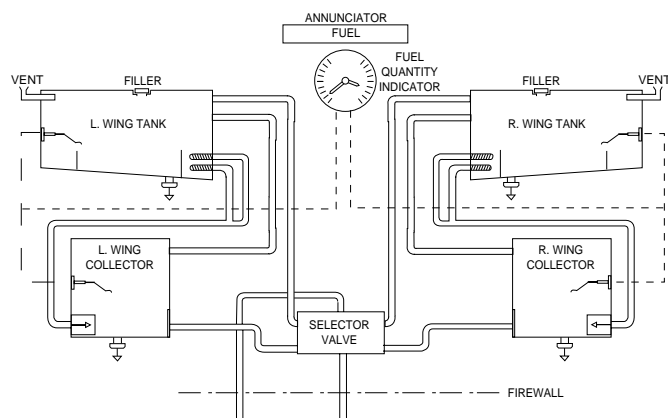
During a flight, the pilot noticed that the right fuel quantity indicator went to “zero” when he selected the right fuel tank.

While investigating this report, a technician found that the fuel quantity transmitter, installed in the right collector tank, was operating correctly. Further investigation revealed that the right collector tank fuel inlet line, from the right main fuel tank check valve, was “glued” closed. He suspected the foreign material (glue) was deposited on the check valve when the aircraft was manufactured.

The investigation of the check valve problem led the technician to discover that even with a fully functioning check valve, the right or left main fuel tanks will not supply adequate fuel to keep the collector tanks full. This occurs when the selected main fuel tank quantity is low (one-half tank or less). This problem was not manifest until the fuel level in the main tank was lower than one-half because fuel filled

the collector tank through the upper vents connecting the collector tank to the main tank when the fuel level in the main tank was over one-half. (Refer to the illustration.)

The manufacturer's technical data indicates the front and aft fuel supply lines from each main tank connect to a single "tee" installed in each collector tank. The submitter believes that changing to two supply lines feeding each collector tank may help. This particular aircraft was originally certificated with a Textron Lycoming, Model IO-360 engine as a Model SR-20 and is now equipped with a Textron Lycoming, Model IO-550 engine which demands a greater fuel supply.



The submitter is knowledgeable of other like aircraft that have had similar discrepancies and reminds us that this creates the very hazardous possibility of engine fuel starvation, which usually occurs when it is most needed.

Part total time-31 hours.

GLOBESWIFT

Globe Swift; Model GC-1B; Landing Gear Collapse; ATA 3230

During an afterlanding rollout, the right main landing gear collapsed. The pilot stated the landing gear indicated "down and locked" prior to landing.

A technician disassembled the right main gear retraction unit and discovered that the "woodruff" key (P/N AN280-H-205) was sheared. This allowed the pinion gear to rotate approximately one-eighth inch past the position that allows the gear to lock in the "down" position.

The submitter could not determine if the "woodruff" key sheared before or after the gear collapse. He speculated the "woodruff" key sheared when the hydraulic powerpack primary circuit opened and/or the microswitch stuck and gave a false indication. There was no damage to the downlock assembly, which indicates there was insufficient hydraulic pressure available.

Part total time since overhaul-187 hours.

PIPER**Piper; Model PA 23-250; Aztec; Landing Gear Failure; ATA 3230**

The pilot reported that during a landing rollout, the right main landing gear collapsed.

During an investigation, a technician discovered that the right main gear center drag link bolt (P/N 402-427) was missing. After considerable searching, he found the broken bolt. It appeared the bolt failed under shear forces, and it displayed a considerable amount of wear.

The submitter speculated the landing gear drag link bolt was installed as original equipment when the aircraft was manufactured.

Part total time-9,000+ hours.

Piper; Model PA 28-161; Warrior; Engine Starting System Defect; ATA 8000

The pilot reported that during a preflight inspection, the engine starter continued to turn the engine with the key off and removed.

A technician discovered the starter was supplied electrical power any time the battery was connected. While investigating, he discovered the wrong starter solenoid (P/N 71-109225-2) was installed. He researched the aircraft maintenance records and discovered the starter solenoid had never been replaced or repaired since the aircraft was new. He checked several other like aircraft and found they all had the correct starter solenoid installed.

After removing the starter solenoid, the technician found the electrical contacts were “welded” together.

Part total time-2,109 hours.

Piper; Model PA 28-161; Cadet; Flight Control Defects; ATA 2740

During a scheduled inspection, the inspector discovered that a stabilator control cable was defective.

The right forward stabilator control cable had approximately half of the strands broken. The damage was located at the bank of pulleys adjacent to the rear spar. Many of the pulleys at this location do not have bearings, and there is not much cable deflection to apply pressure on the pulleys to turn them; therefore, the pulleys become stuck occasionally.

The submitter recommended cleaning all the flight control cables with a soft cotton rag and checking the cables for broken strands.

Part total time-7,000 hours.

Piper; Model PA 28-180; Cherokee; Engine Oil Leakage; ATA 7930

During a postflight inspection, a technician discovered an oil film on the engine firewall disk/retainer (P/N 63915-003) adjacent to a grommet used to accommodate the oil pressure indicator line.

This was the third flight since complying with the requirements of Airworthiness Directive (AD) 96-09-10, which deals with the engine oil pump. Engine oil was also found in the firewall blanket inside the cockpit. The technician disassembled the disk and retainers from the firewall and applied

approximately 15-PSI of pressure to the aluminum oil line (P/N 63201-000). When the pressure was applied, the line separated due to extremely severe corrosion in the area where it passed through the firewall disk/retainer assembly.

Some PA 28-series aircraft use a single line to the engine oil pressure indicator in the cockpit while others use a two-piece line with a bulkhead fitting (P/N AN832-4) installed in the firewall. The submitter recommended subjecting all PA 28-series aircraft using the single line to a one-time inspection. The line should be inspected in the area where it passes through the firewall for evidence of corrosion, leakage, or other defects.

Separation of the oil pressure indication line in flight could cause complete loss of engine oil and catastrophic engine failure.

Aircraft total time-1,931 hours.

Piper; Model PA 28R-201; Arrow; Landing Gear Position Indicating Problem; ATA 3260

When the pilot extended the landing gear for landing, the right main gear did not indicate down and locked. He made a safe landing after a ground observer informed him the gear appeared to be locked in the down position.

When the aircraft was parked on the ramp, a technician investigated the problem finding that the right main gear "down limit switch" was not properly rigged. He adjusted and rigged the switch (P/N 36742-014) and performed a retraction test. When he checked the emergency extension system, the switch arm hinge pin became dislodged and allowed the switch to de-activate. After he replaced the switch, the landing gear functioned properly. He inspected the old switch assembly and discovered the hinge pinholes for the arm were enlarged and allowed the hinge pin to migrate out of the switch arm.

Inspection personnel are urged to ensure that all of the switch arm hinge pins are installed securely during scheduled inspections.

Part total time-471 hours.

Piper; Model PA 31-350; Chieftain; Nose Landing Gear Failure; ATA 3230

The pilot reported he could not attain a safe down-and-locked indication for the nose landing gear prior to landing. The nose gear collapsed during the landing.

While moving the aircraft off of runway, the technician discovered the nose gear's upper right drag brace (P/N 40336-00) was broken. He speculated the broken drag brace prevented the extension of the nose gear. The cause of the drag brace failure was not given, although metal fatigue, corrosion, and/or a pre-existing crack may have been contributing factors.

Part total time not reported.

Piper; Model PA 31T-620; Cheyenne II; Fuel Leakage; ATA 2810

After filling the aircraft fuel tanks, the technician noticed fuel leaking from the right wing.

The fuel was coming from the right nacelle's fuel-quantity indicator probe plate. The technician removed the plate and found that the "O" ring seal, used to seal the probe access plate, was extruded from the groove in two places.

Many times, the aircraft fuel tanks are not completely filled; therefore, leaks and other defects at the top of the tanks may go undetected for long periods of time.

Part total time not reported.

Piper; Model PA 32RT-300; Lance; Engine Exhaust System Muffler Failure; ATA 7820

While conducting a scheduled inspection, the inspector discovered that the center muffler housing was split open at the upper weld seam.

This defect allowed hot exhaust gases to damage the upper aluminum muffler shroud and the engine induction air cover. The submitter suggested that technicians conduct a close inspection, both visual and pressure test, of all muffler and exhaust system components. Defects may be more prevalent at weld seams.

Part total time-2,049 hours.

Piper; Model PA 32-301T; Turbo Saratoga; Flight Control Defect; ATA 2720

While conducting an annual inspection, the inspector discovered that a rudder control cable turnbuckle was broken.

The aft left rudder cable assembly (P/N 62701-008) turnbuckle was broken at the threaded portion of the turnbuckle. The safety wire was the only thing keeping the cable from separating and causing complete loss of rudder control. This defect could have resulted in loss of aircraft control and a catastrophic accident. The technician did not offer a cause for this defect, but metal fatigue or a defect inside the metal may have been contributing factors.

The submitter recommended that technicians be cognizant and vigilant for this type of defect during scheduled inspections. This report was the subject of three National Transportation Safety Board (NTSB) Safety Recommendations (A-01-6, -7, and -8).

Part total time-2,720 hours.

Piper; Model PA 46-500; Mirage; Smoke in the Cockpit; ATA 2121

After a flight, the pilot stated he experienced smoke in the cockpit. The “cabin fan” circuit breaker opened, and the smoke dissipated.

While investigating, a technician discovered that the electrical load buss relay (P/N 688-498) was severely burned and heat damaged. The relay is located below the right circuit breaker panel. Since this was a new aircraft, it was returned to the manufacturer for repair.

Part total time-17 hours.

HELICOPTERS

BELL

Bell; Model 206 BIII; Long Ranger; Defective Starter/Generator Seal; ATA 2435

A technician discovered an oil leak in a gearbox and changed the starter/generator pad seal (P/N 23063371) to correct the problem. He followed the proper maintenance manual procedures for replacing the seal. However, after 2 hours of operation, the seal was leaking again.

Both seals were torn at the sealing lip. The submitter stated both seals were the “new-style” seals. The “new-style” seals are marked “63005S0CN23063371, Rev B, Mfr-80201.” The “new-style” seals replace the “old-style” seals (P/N 6854424). The submitter believes the “new-style” seals are not compatible with turbine engine oil (EXXON 2380).

The submitter has experienced three similar seal failures in a relatively short period of time.

Part total time-2 hours.

EUROCOPTER

Eurocopter; Model AS-350BA; Ecureuil; Starter/Generator Failure; ATA 2421

During a flight, the pilot noticed the engine surging. A drop in RPM indicated power loss. He made a safe, precautionary landing.

A ground operational test of the engine verified a strong, high-frequency vibration coming from the starter/generator (P/N 23032-022) and the fuel control, as well as engine surging. The technician isolated the problem to the starter/generator. After removing and replacing the starter/generator, he conducted an operational test on the new starter/generator which proved the problem was solved. He disassembled the defective starter/generator and discovered the internal lubrication (grease) was dried up, and the bearing was severely heat damaged.

The submitter stated the manufacturer’s technical data should incorporate a “calendar time” for the replacement of these bearings.

Part total time since overhaul-593 hours.

Eurocopter; Model B0-105LS; Lift Ship; Vertical Stabilizer Structural Defect; ATA 5530

During a preflight inspection, the technician found a crack in the vertical stabilizer fin.

It appeared the crack started at the forward top attachment point and ran aft approximately 8 inches. This defect was located on the inside surface at the point where the vertical stabilizer fin (P/N 105-30591) attaches to the horizontal stabilizer.

The submitter recommended extra vigilance be given for cracks in this area during scheduled inspections and maintenance.

Part total time-4,209 hours.

Eurocopter; Model EC-120B; Hydraulic System Anomaly; ATA 2900

A technician was performing a normal engine runup procedure and system test, which required turning off the hydraulic system. When the hydraulic system was turned off, the “HYD” warning light illuminated, but hydraulic power was still supplied to the controls.

The technician changed all three servo “electrovalves” (P/Ns EVP310-566, -596, and -606), and the problem was cured. However, after approximately 5 hours of operating time, the same anomaly occurred again. To solve this problem, he removed and replaced the hydraulic system powerpack.

Part total time-395 hours.

Eurocopter; Model SA-365N1; Dauphin; Vertical Fin Separation; ATA 5530

The pilot stated that during a flight, the right vertical fin separated from the aircraft.

The technician discovered the vertical fin separation was caused by failure of the attachment studs (P/N 356a13-3017-23). It appeared that one of the studs failed due to metal fatigue which led to the failure of the remaining studs. The metal fatigue was evidenced by what appeared to be pre-existing stress cracks in the one stud.

The submitter recommended the manufacturer add an inspection item to the 100-hour airframe requirements to require removal and inspection of the vertical fin attachment studs. Also, he suggested the manufacturer establish a life limit for the studs and a maintenance procedure for using a “tap” to clean out the threads for the studs. Some of the studs have a grip length and some do not.

Part total time not reported.

POWERPLANTS AND PROPELLERS

HARTZELL

Hartzell; Model HC-C2YK-2CUF; Blade Shank Crack; ATA 6111

This propeller was being used on a Britten-Norman, Model BN-2, Islander aircraft.

The pilot reported that during takeoff, the left engine propeller would not develop full power. He returned to the departure field for landing and, prior to touchdown, noticed a vibration. Just after touchdown, the vibration severity increased significantly, and he shut down the engine.

A technician inspected the propeller and found that it was over 1 inch out of track. He removed the propeller and sent it to a certified repair station for tear down and inspection.

The repair station technician disassembled the propeller and a visual inspection revealed a large crack that traveled approximately 270 degrees around the number 2 blade shank. Also, the inspection revealed the number 2 blade arm was cracked.

The submitter did not offer a cause for this defect.

Part total time since overhaul-835 hours.

TEXTRONLYCOMING

Textron Lycoming; Model TIO-540; Oil Bypass Valve Failure; ATA 7922

The article contains information from a report on a Piper Model PA 31- 350 aircraft.

The owner brought the aircraft to a maintenance facility and asked to have the cause of high engine oil temperature investigated.

A technician discovered the “Theromostatic” oil bypass valve (P/N 53E19600) was defective. The nut was missing from the valve and was found in the oil sump. Some time ago there was a rash of similar reports, and changes were made to correct this problem. The FAA Service Difficulty Reporting (SDR) program data base contains 59 entries for the part number previously mentioned. Textron Lycoming issued several service information publications and revisions dealing with this subject.

In this case, it is possible that the oil bypass was manufactured prior to the changes and was not subjected to the service information issued by the manufacturer.

Part total time-1,087 hours.

Textron Lycoming; Model TIO-540; Engine Failure; ATA 8530

This engine was being used on the right wing of a Piper Model PA 31P-350 aircraft.

After a flight, the pilot reported that during cruise flight (16,500 feet altitude, 32 inches Hg, and 2,200 RPM) he noticed a “shudder” through the airframe. At the same time, the manifold pressure dropped approximately 1 inch Hg. The pilot advanced the throttle with no change in manifold pressure. After approximately 1 minute, he heard a loud bang. He secured the engine and made a safe, single-engine landing.

A technician opened the cowlings and discovered the number 5-cylinder assembly had separated from the engine case. The piston and connecting rod were still attached and in the cylinder. The rod cap was broken and found in the crankcase. The submitter gave no further explanation concerning the cause of this failure. Given the relatively short time since overhaul, it is possible the rod bearing clearance was not in accordance with the manufacturer’s recommendations.

Part time since overhaul-345 hours.

AMATEUR, EXPERIMENTAL, AND SPORT AIRCRAFT

AVIAT

Aviat; Model A-1B; Husky; Landing Gear Failure; ATA 3211

During a landing, the left main landing gear separated from the aircraft.

A technician discovered the gear strut (P/N 35017-502) broke adjacent to the front attachment fitting in a weldment. The weld penetration at the separation point was approximately one-third through the parent material, which the manufacturer considered adequate. The aircraft owner, of course, had a much different opinion.

The dispute was settled by sending the broken landing gear assembly to an independent metallurgical laboratory for analysis. The laboratory report stated the weld penetration could have been better; however, it did provide adequate strength for the assembly. The laboratory analysis determined the landing gear failed due to a "hard landing."

Part total time not reported.

LANCAIR

Lancair; Model ES; Propeller Drive Failure; ATA 6100

The pilot stated that while flying at 5,000 feet, he noticed smoke coming from the front part of the cowling. When he reduced engine power, the smoke stopped. During the landing approach, he increased the power to make the runway; however, the propeller did not respond. The flight ended with an accident.

An inspection of the propeller drive system revealed the belt was "mostly gone," and the lower front belt pulley bearing was seized and severely overheated. The submitter believes the bearing seized which caused the belt to overheat and wear away.

It would be wise to inspect these bearings for freedom of movement and wear at every opportunity.

Part total time-361 hours.

ACCESSORIES

EMERGENCY LOCATOR TRANSMITTERS (ELT)

The following article was taken from a report concerning an ACK Technologies, Inc., Model E-01, ELT installed in an Aeronca, Model 7EC aircraft. (*This article is printed as it was received.*)

While conducting an annual inspection, a technician discovered that the negative electrical lead running from the ELT battery compartment to the transmitter was broken.

Evidence indicated that the electrical lead was consumed by severe corrosion causing complete separation. Both the lower and upper ELT battery contacts were severely corroded and the plating had fallen off of the contacts. One of the eight batteries was completely dead; however, there were no corrosion products on the battery and it had not leaked.

According to the manufacturer's technical data, the front transmitter cover screws are "not to be removed" by field personnel. When received from the manufacturer, the cover screws are sealed with a "witness" mark. In this case, the technician did open the transmitter where he found the defects mentioned.

The submitter recommended the manufacturer revise their technical data to allow periodic inspection for defects inside the transmitter case.

Part total time not reported.

AIRNOTES

ALL AIRWORTHINESS DIRECTIVES ARE ON THE WEB

The FAA, Aircraft Certification and Flight Standards Services are pleased to announce that all Airworthiness Directives (ADs) are now available on the Internet in the Regulatory and Guidance Library (RGL).

The Internet address is: <<http://www.airweb.faa.gov/rgl>>

In addition, you can find the ADs from the FAA homepage by clicking on "FAA Organizations" and then "Aircraft Certification Service."

This improvement should be of great benefit to aircraft owners, operators, technicians, pilots, and other interested persons.

SUBSCRIPTIONS

The Government Printing Office (GPO) distributes this publication. If you have any questions regarding a subscription to this publication, please direct your questions to GPO.

You may contact GPO at: Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, telephone (202) 512-1800, fax (202) 512-2250.

When you contact GPO, be specific concerning the publication you are interested in (e.g., Advisory Circular 43-16A). GPO accepts payment in the form of checks and credit cards. Please make your checks payable to the *Superintendent of Documents*.

In the past, we furnished the GPO subscription form in this publication. The older issues which contain the subscription form, may not have current pricing information. Since GPO controls price increases, contact GPO for current subscription information.

ELECTRONIC VERSION OF MALFUNCTION OR DEFECT REPORT

One of the recent improvements to the AFS-600 Internet web site is the inclusion of FAA Form 8010-4, Malfunction or Defect Report. This web site is still under construction and further changes will be made; however, the site is now active, usable, and contains a great deal of information.

Various electronic versions of this form have been used in the past; however, this new electronic version is more user friendly and replaces all other versions. You can complete the form online and submit the

information electronically. The form is used for all aircraft except certificated air carriers who are provided a different electronic form. The Internet address is:

<http://av-info.faa.gov/isdr/>

When the page opens, select “M or D Submission Form” and, when complete, use the “Add Service Difficulty Report” button at the top left to send the form. Many of you have inquired about this service. It is now available, and we encourage everyone to use this format when submitting aviation, service-related information.

SERVICE DIFFICULTY REPORTING PROGRAM

The objective of the Service Difficulty Reporting (SDR) Program is to achieve prompt and appropriate correction of conditions adversely affecting continued airworthiness of aeronautical products fleet wide. The SDR program is an exchange of information and a method of communication between the FAA and the aviation community concerning inservice problems.

A report is filed whenever a system, component, or part of an aircraft, powerplant, propeller, or appliance fails to function in a normal or usual manner. In addition, if a system, component, or part of an aircraft, powerplant, propeller, or appliance has a flaw or imperfection which impairs, or which may impair its future function, it is considered defective and should be reported under the program.

These reports are known by a variety of names: Service Difficulty Reports (SDR), Malfunction and Defect Reports (M and D) and Maintenance Difficulty Reports (MDR).

The consolidation, collation and analysis of the data, and the rapid dissemination of trends, problems and alert information to the appropriate segments of the aviation community and FAA effectively and economically provides a method to ensure future aviation safety.

The FAA analyzes SDR data for safety implications and reviews the data to identify possible trends that may not be apparent regionally or to individual operators. As a result of this review, the FAA may disseminate safety information to a particular section of the aviation community. The FAA also may adopt new regulations or issue airworthiness directives (AD's) to address a specific problem.

The primary source of SDR's are certificate holders operating under Parts 121, 125, 135, 145 of the Federal Aviation Regulations, and the general aviation community which voluntarily submit records. FAA Aviation Safety Inspectors may also report service difficulty information when they conduct routine aircraft and maintenance surveillance as well as accident and incident investigations.

The SDR database contains records dating back to 1974. Reports may be submitted on the Internet through an active data entry form or on hard copy. The electronic data entry form is in the AFS-600 Aviation Information web site under the heading SDR Main Menu. The URL is: <<http://av-info.faa.gov>>

A public search/query tool is also available on this same web site. This tool has provisions for printing reports or downloading data.

At the current time we are receiving approximately 45,000 records per year.

Point of contact is:

Tom Marcotte
Service Difficulty Program Manager
Aviation Data Systems Branch, AFS-620
P.O. Box 25082
Oklahoma City, OK 73125

Telephone: (405) 954-6500
9-AMC-SDR-ProgMgr@mmacmail.jccbi.gov

ADDRESS CHANGES

In the past, the Designee Standardization Branch (AFS-640) maintained the mailing list for this publication. Now, the Government Printing Office (GPO) sells this publication and maintains the mailing list; therefore, please send your address change to: U.S. Government Printing Office, **ATTN: SSOM, ALERT-2G**, 710 N. Capital Street N. W., Washington, DC 20402

You may also send your address change to GPO via FAX at: (202) 512-2168. If you FAX your address change, please address it to the attention of: **SSOM, ALERT-2G**. Whether you mail or FAX your address change, please include a copy of your old address label, and write your new address clearly.

IF YOU WANT TO CONTACT US

We welcome your comments, suggestions, and questions. You may use any of the following means of communication to submit reports concerning aviation-related occurrences.

Editor: Phil Lomax (405) 954-6487

FAX: (405) 954-4570 or (405) 954-4748

Mailing address: FAA, ATTN: AFS-640 ALERTS, P.O. Box 25082,
Oklahoma City, OK 73125-5029

E-Mail address: Phil_W_Lomax@mmacmail.jccbi.gov

You can access current and back issues of this publication from the internet at: <http://afs600.faa.gov>

When the page opens, select “AFS-640” and then “Alerts” from the drop-down menu. The monthly issues of the Alerts are available back to July 1996, with the most recent edition appearing first.

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between September 19, 2001, and October 24, 2001, which have been entered into the FAA Service Difficulty Reporting (SDR) System data base. This is not an all inclusive listing of Service Difficulty Reports. For more information, contact the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The mailing address is:

FAA
Aviation Data Systems Branch, AFS-620
PO Box 25082
Oklahoma City, OK 73125

These reports contain raw data that has not been edited. If you require further detail please contact AFS-620 at the address above.

FEDERAL AVIATION ADMINISTRATION

Service Difficulty Report Data

Sorted by Aircraft Make and Model then Engine Make and Model. This Report Derives from Unverified Information Submitted By the Aviation Community without FAA review for Accuracy.

ACFTMAKE ACFTMODEL REMARKS	ENG MAKE ENG MODEL	COMPMMAKE COMPMODEL	PART NAME PART NUMBER	PART CONDITION PART LOCATION	DIFF-DATE OPER CTRL NO.	T TIME TSO
AGUSTA A109 T/R TURNNION P/N 109-0131-05-111 TT: 2360.8. THE TRUNNION SHOWED SIGNIFIGANT WEAR AT DISSASSEMBLY AFTER THE PILOT NOTEDA HIGH FREQUENCY VIBRATION. THE AGUSTA T/R ASSY IS SUBJECT TO BECOMING STIFF, WHEN THIS OCCURS THE T/R HUB SHOULD BE COMPLETELY DISSASSEMBLED AND INSPECTED FOR WEAR. I WOULD SUGGEST AGUSTA INSTITUTE A SCHEDULED INSPECTION PRIOR TO THE 2400HR. INSPECTION THAT IS NOW IN PLACE.			PIVOT 109013105111	WORN TAIL ROTOR	09/28/2001 KUYA075922	2361
AGUSTA A109A2 T/R TURNNION P/N 109-0131-05-111 TT: 2360.8. THE TRUNNION SHOWED SIGNIFIGANT WEAR AT DISSASSEMBLY AFTER THE PILOT NOTEDA HIGH FREQUENCY VIBRATION. THE AGUSTA T/R ASSY IS SUBJECT TO BECOMING STIFF, WHEN THIS OCCURS THE T/R HUB SHOULD BE COMPLETELY DISSASSEMBLED AND INSPECTED FOR WEAR. I WOULD SUGGEST AGUSTA INSTITUTE A SCHEDULED INSPECTION PRIOR TO THE 2400HR. INSPECTION THAT IS NOW IN PLACE.			PIVOT 109013105111	WORN TAIL ROTOR	09/28/2001 KUYA075921	2361
AGUSTA A119 (AUS) TAIL ROTOR BLADE CRACKED ON INNER FACE. THE CRACK LENGTH RUNS FOR ALMOST THE FULL CHORD OF THE BLADE. FOUND DURING INSPECTION IAW AD/119/1 PT1.	PWA PT6T3		BLADE 109813201107	CRACKED TAIL ROTOR	08/13/2001 AUS20010864	113
AMD FALCON900 ENGINE RETURNED FOR MAINTENANCE WHEN AIRCRAFT WAS EXPERIENCING ENGINE TEMPERATURE LIMIT AT TAKE OFF AND SUBSEQUENT HUNGSTARTS. THE INNER HUB OF THE 4TH LOW COMPRESSOR STATOR WAS FOUND SEPARATED DURING ENGINE MAINTENANCE DISASSEMBLY. MAJOR ENGINE COMPONENT DOWNSTREAM DAMAGE OCCURED AS SECONDARY DAMAGE. ENGINE MANUFACTURER NOTIFIED OF THIS UNIQUE FINDINGS.	GARRTT TFE7315BR		STATOR 30745557	SEPARATED COMPRESSOR	09/05/2001 RO462097	2462
AMD FALCON900EX CARBON SEAL CERAMIC RING WAS FOUND TO BE BROKEN DURING THE ENGINE TEARDOWN. THE CARBON RING SEAL WAS ALSO FOUND BROKEN. THERE WAS MUCH COLLATERIAL DAMAGE. THE OPERATOR REPORTED OIL LOSS DURING FLIGHT WITH SUBSEQUENT OIL CONTAMINATION UPON POST FLIGHT ENGINE EXAMINATION. THERE WILL BE AN ENGINE CONDITION REPORT GENERATED TO DETAIL THE FINDINGS POST ANALYTICAL INSPECTION.	GARRTT TFE73160	ALIDSG	CARBON SEAL 30756441	BROKEN HP CASE	08/20/2001 RO THE NR 4	1101
AMRGEN AA1 CORROSION DISCOVERED IN UPPER SURFACES OF BOTH LEFT AND RIGHT SUPPORTS. DETECTED BY PREPING THE SUPPORTS FOR PAINT WITH A STAINLESS STEEL WIRE BRUSH AND SLIGHT RAISED LINE WAS NOTICED. PICKING REVEALED A LARGE AREA OF POWDER CORROSION AND EXFOLIATION BELOW THE SURFACE. THE OTHER SUPPORT WAS PICKED AT, THOUGHT THE SURFACE LOOKED OK AND IT WAS ALSO CORRODED AS MUCH AS THE FIRST ONE. THE SUPPORTS MUST BE REPLACED WHICH IS WELL COVERED IN THE AIRCRAFT MM. INNERGRANULAR CORROSION IS USUALLY THE RESULT OF DEFECTIVE HEAT TREATING DURING MANUFACTURING AND THIS PART IS USED ON ALL	LYC O320E2G		SUPPORT 1020691	CORRODED MOUNT	04/18/2001 2001FA0000389	2229

AMTR	LYC	MCAULY	GASKET	LEAKING	02/12/2001	
RV8	IO360A1B6		MS914401	GOVERNOR	2001FA0000374	

GASKET PN MS914401 THAT IS SUPPLIED WITH THE NEW GOVERNOR DOES NOT COVER THE FULL FACE MATING SURFACE OF THE GOVERNOR EXPOSING APPROX. .0625 INCH OF THE LOWER SCREW HOLE. THE LOWER SCREW HOLE INTERSECTS AN OIL PRESSURE CAVITY ON THE ENGINEMATING SERVICE. THE SHORT GASKET LEAKS OIL FROM LOW RPM. DURING AN INITIAL FLIGHT OVER 4 QUARTS OF OIL LEAKED IN LESSTHAN 15 MINUTES OF FLIGHT.

BAG	GARRTT		ENGINE	DAMAGED	07/30/2001	
JETSTM3101	TPE33110UG		TPE33110UG514	NACELLE	CA010822013	3319

(CAN) ON LANDING IN FORT MCMURRAY ON THE MORNING OF 30 JULY, 01 AN UNCOMMANDED ENGINE SHUTDOWN OCCURRED. THE PILOT REPORTED THAT THE ENGINE SHUT DOWN WHEN THE WHEEL TOUCHED THE GROUND, OR SHORTLY THEREAFTER. HE PULLED THE STOP FEATHER LEVER FOR THAT ENGINE AND CONTINUED THE LANDING. ON INVESTIGATION OF THE ENGINE, WE COULD NOT FIND ANYTHING WRONG EXTERNALLY, BUT THE ENGINE WOULD NOT START. WE REMOVED THE ENGINE FROM THE AIRCRAFT AND FOUND EVIDENCE THAT INTERNAL DAMAGE HAD OCCURRED. THE THIRD STAGE APPEARS TO HAVE BEEN RUBBING.

BAG	GARRTT	TERMINAL	MISSING	08/08/2001	
JETSTM3212	TPE33112UHR	36925	GOUND	CA010905015	

(CAN) WHILE PILOT WERE DOING THROTTLE MOVEMENT CHECKS, THEY NOTICED THAT HYDRAULIC PRESSURE GAUGE NEEDLE WERE MOVING WITH THE THROTTLE. UPON TROUBLESHOOTING, FOUND THE LT MAIN BATTERY GROUND TERMINAL WAS MISSING & THE ATTACHMENT POINT (EP1) WAS DETERIORATED. TERMINAL END AND GROUND LUG REPLACED. OPERATIONAL CHECK CARRIED OUT, FOUND SERVICEABLE. JETSTREAM SB 24-JA851056 AND 24-JA860646 ADDRESSED THESE PROBLEMS. THIS SB IS OPTIONAL.

BBAVIA	CONT	SPAR	CRACKED	07/09/2001	
7CCM	C90*		WING	2001FA0000387	

DURING INSPECTION TO COMPLY WITH AD, CRACKS WERE FOUND INBOARD AND LEFT FRONT SPAR, INBOARD END RIGHT REAR SPAR. .001 FEELER GAGE COULD BE INSERTED .1250 OR MORE INTO CRACKS.

BBAVIA	AMTR	SPAR	CRACKED	06/25/2001	
7ECA	O200		WING	CA010810013	

(CAN) BOTH WINGS WERE STRIPPED OF FABRIC & L/E MATERIAL REMVD DURING INSP. BOTH WING TIPS WERE REMVD ALONG WITH FUEL TANKS & AILERON BELLCRANKS. SPARS WERE BLOWN WITH COMPRESSED AIR THEN WASHED DOWN WITH MILD SOAP & WARM WATER. THE INSP THEN PROCEEDED USING HIGH INTENSITY LAMP & LARGE MAGNIFYING GLASS. AFTER REMOVING VARNISH IN LIFT STRUT ATTACHMENT POINT, I COULD IDENTIFY VERY SMALL CRACK IN GLUE JOINT ON REAR FACE OF RIGHT REAR WING SPAR. USING LIGHT & MAGNIFYING GLASS, I DETECTED ON UPPER EDGE OF RIGHT REAR SPAR, TOTAL OF 5 COMPRESSION TYPE CRACKS WHICH UNDER NORMAL LIGHTING CONDITIONS COULD NOT BE SEEN. 2 ACTUAL SPLITS WERE REVEALED STARTING AT REINFORCING PLYWOOD PLATE.

BBAVIA	LYC	STRUCTURE	CRACKED	07/25/2001	
8GCBC	O360C2E	71493	FUEL CELL	CA010813021	

(CAN) - FUEL TANK CRACKING. - POSSIBLY DUE TO TOO LIGHT GUAGE OF MATERIAL & NO INTERNAL BAFFLES INTANK. CRACKS USUALLY OCCUR AT END OF STIFFENER INDENTS. - WE AVERAGE 2-3 FUEL TANK FAILURE DUE TO CRACKING PER FLYING SEASON.

BBAVIA	LYC	SHUTOFF VALVE	FAILED	08/01/2001	
8GCBC	O360C2E	110660	FUEL SYSTEM	CA010813022	

(CAN) - THREADED COLLAR THAT SECURES VALVE SHAFT IN BODY CAME LOOSE AND DETACHED ITSELF FROM SHUTOFF BALL INSIDE VALVE.FOR SOME REASON THE VALVE WAS OR WENT INTO THE CLOSED POSITION & STARVED THE ENGINE FOR FUEL DURING TAXI OUT FOR DEPARTURE. - THERE IS NOTHING PROVIDED TO SECURE THE COLLAR SO THAT IT WILL NOT LOOSEN.

BEECH	PWA	DOOR FRAME	CRACKED	06/30/2001	21552
100BEECH	PT6A28	50430043867	FUSELAGE	CA010813009	

(CAN) DOOR FRAME FORWARD 50-430043-867 CRACKED ON LOWER BAYONNET HOLE TO SCREW HOLE AND 1/2" BEYOND. OTHER SCREW HOLE TO BAYONNET HOLE. DOOR FRAME AFT 50-430043-865 CRACKED ON UPPER BAYONNET HOLE TO SCREW HOLE ONE ONLY.

BEECH	PWA	STARTER GEN	OVERHEATED	08/31/2001	
1900C	PT6A65B	23085001	ENGINE	CA010905005	1112

(CAN) A/C DEPARTED AIRPORT, 5 MINUTES AFTER TAKEOFF THE LT GENERATOR ANNUNCIATOR ILLUMINATED & CREW REPORTED SMELLING ASTRANGE BURNING ODOUR. THEY TURNED A ROUND RETURNED TO AIRPORT. AN UNEVENTFUL LANDING WAS MADE & A/C SENT TO HANGAR. THE FLOOR BOARDS WERE LIFTED & THE ODOUR INCREASED. THE LT GENERATOR CONTROL UNIT WAS FOUND TO BE THE CAUSE, IT WAS REPLACED. THE LT START/GEN WAS ALSO FOUND TO BE OVERHEATED & REPLACED. THE CIRCUIT BREAKER FOR THE SYSTEM WAS FOUND POPPED BUTOBVIOUSLY TOO LATE. IT WAS RESET & THE SYSTEM TESTED WITH NO FURTHER FAULTS. GENERATOR

BEECH	PWA	TORQUE LINK	CRACKED	08/15/2001	12664
1900D	PT6A67D	1148100217	MLG	CA010831003	3969

(CAN) DURING BRAKE REMOVAL THE AME FOUND A CRACK ON THE TORQUE LINK LUG. AFTER INSPECTION WE FOUND BOTH SIDES CRACKED.THE PARTS WERE REPLACED.

BEECH		ANTENNA	CRACKED	08/16/2001	
35C33		VP10	VHF SYSTEM	2001FA0000367	

A/C ARRIVED WITH AN ANTENNA 'FLUTTERS' SQUAK. UPON INSPECTION OF VHF COMM ANTENNA, IT WAS NOTED THAT THE ANTENNA WAS INSTALLED WITH NO SUPPORTING DOUBLER. UPON ANTENNA REMOVE, A 5.5 INCH RADIAL CRACK WAS DISCOVERED AROUND THE ANTENNA BASE. THE ADJOINING STRINGER IS ALSO CRACKED. THE SKIN UNDER THE ANTENNA WAS CORRODED DUE TO NO SEALANT BEING APPLIED TO THE ANTENNA BASE AFTER

BEECH	LYC	ELECTROSYS	BEARING	DEPARTED	08/16/2001
76	O360A1G6D			FWD BUSHING	2001FA0000392

IN STARTER DRIVE END CASTING, THE (FORWARD) BUSHING DEPARTED FROM THE CASTING THIS IS THE FORWARD PIVOT BUSHING/ BEARINGFOR THE BENDIX DRIVE SHAFT. 432.24 HOURS OF FLIGHT TRAINING, OVERHAULED BY MFG.

BEECH	CONT	CONT	EXHAUST PIPE	FAULTY	09/04/2001
95C55	IO520C	IO520C	K9695000277	ENGINE	AUS20010990

(AUS) LH ENGINE EXHAUST PIPE HELD ON BY REAR CLAMP ONLY AND TOUCHINGFIREWALL. HEAT AFFECTED PLASTIC JOINER TUBE FOR PITOT SYSTEMLOCATED BEHIND FIREWALL.

BEECH	PWA	BEECH	TORQUE TUBE	CRACKED	08/14/2001
99	PT6A28	1156100103		ELEVATOR	CA010828023

(CAN) UPON PERFORMING THE SB2145 ON THE COMPONENT.FIRST INSPECTION FROM FACTORY, WE DO IT UPON ARRIVAL FOR QUALITY REASONS. A CRACK WAS FOUND DURING THE LPI PROCESS.THE CRACK TRAVELS FROM INSIDE THE HOLE TO APROX. 4MM OUTSIDE THE HOLE RUNNING AXIAL ALONG THE TUBE. TUBE WAS REJECTED.

BEECH	PWA		BLADE	SEPARATED	07/03/2001
A100	PT6A28			COMPRESSOR	CA010813005

(CAN) ON TAKEOFF PARTIAL LOSS OF POWER EXPERIENCED ON RT ENGINE. TAKEOFF ABORTED. UPON SUBSEQUENT TEAR DOWN WITH A PRATT& WHITNEY REPRESENTATIVE PRESENT, IT HAS BEEN DETERMINED THAT A COMPRESSOR TURBINE BLADE SEPARATED AND DAMAGED COMPONENTS DOWNSTREAM IN ENGINE.

BEECH		BRACKET	CRACKED	09/18/2001	
A36			MLG DOOR	2001FA0000307	
WHILE PERFORMING ANNUAL INSPECTION A CRACKED BRACKET WAS FOUND AT THE REAR RIGHT INBOARD GEAR DOOR HINGE. UPON REMOVING THE WING-TO-FUSELAGE CLOSEOUT PANEL IT WAS DISCOVERED THAT THE FORWARD TWO INBOARD GEAR DOOR HINGE BRACKETS WERE ALSO CRACKED. CAUSE UNKNOWN.					
BEECH	LYC	BLOCK	CRACKED	07/15/2001	
B23	O360*		ENGINE	2001FA0000328	
AIRCRAFT WS ON FINAL APPROACH TO OCF, ENGINE WAS NOISY AND QUIT. AIRCRAFT MADE EMERGENCY LANDING ON HORSE RACE TRACK. OPENED COWLING, FOUND 3 INCH CRACK AFT, LEFT, TOPSIDE OF ENGINE BLOCK. ENGINE HAS 2776 HOURS SINCE OVERHAUL. 15 DAYS OUT OF ANNUAL INSPECTION. (M)					
BEECH		BEECH	PISTON	CRACKED	09/18/2001 4611
B300		505211516	FLAP ACTUATOR	2001FA0000323	
RIGHT OUTBOARD FLAP ACTUATOR CRACKED AT BASE OF PISTON WHERE THE END PLUG IS ATTACHED. THE CRACK WAS 1.5 INCHES LONG AND RESULTED IN THE LOSS OF THE LUBRICATING OIL FROM OUT OF THE PISTON AND SCREW ASSEMBLY. THE LOSS OF OIL WAS THE FIRST INDICATION OF A PROBLEM, AND IT WAS WHILE INVESTIGATING THE OIL LEAK THAT THE CRACK WAS DISCOVERED. THIS CRACK COULD RESULT IN A SIGNIFICANT LOSS OF STRUCTURAL STRENGTH OF THE ACTUATOR WHICH COULD RESULT IN THE STRUCTURAL FAILURE OF THE ACTUATOR ASSEMBLY.					
BEECH		BEECH	PISTON	CRACKED	09/18/2001 4611
B300		505211516	RT FLAP	N988ME	
RIGHT OUTBOARD FLAP ACTUATOR CRACKED AT BASE OF PISTON WHERE THE END PLUG IS ATTACHED. THE CRACK WAS 1.5 INCHES LONG AND RESULTED IN THE LOSS OF THE LUBRICATING OIL FROM OUT OF THE PISTON AND SCREW ASSEMBLY. THE LOSS OF OIL WAS THE FIRST INDICATION OF A PROBLEM, AND IT WAS WHILE INVESTIGATING THE OIL LEAK THAT THE CRACK WAS DISCOVERED. THIS CRACK COULD RESULT IN A SIGNIFICANT LOSS OF STRUCTURAL STRENGTH OF THE ACTUATOR WHICH COULD RESULT IN THE STRUCTURAL FAILURE OF THE ACTUATOR ASSEMBLY.					
BEECH	PWA	CROSSBEAM	CRACKED	08/20/2001 2617	
C90A	PT6A21	50420013451	LWR FWD SILL	CA010912007	2617
(CAN) IT WAS FOUND THAT AN INDIVIDUAL HAD REMOVED MATERIAL FROM THE DOUBLER & CROSS-TIE IN AN EFFORT TO ELIMINATE CONTACT WITH THE EMERGENCY ESCAPE HATCH. CRACKS WERE FOUND PROPAGATING FROM THE SHARP CORNER OF THIS RADIUS. WE ALSO DISCOVERED DURING THE REMOVAL OF THIS PART, THAT IT WAS INSTALLED WITH A PRE LOAD DURING THE RIVETING PROCESS. I AM SURE THIS HELPED THE CRACKS TO FORM. NO REFERENCES OR DATA WAS FOUND TO SUPPORT THE WORK DONE, BUT IT CLEARLY DID NOT FOLLOW STANDARD					
BELL	LYC	BELL	O-RING	SPLIT	09/02/2001 615
205A1	T5313B	212076007003	MS28775212	PISTON	CA010921005
(CAN) O-RING ON ACCUMULATOR SPLIT CAUSING HYDRAULIC FLUID LOSS. SUBSEQUENTLY THE PILOT TURNED THE #2 HYDRAULIC SYSTEM OFF AND LANDED THE AIRCRAFT. FURTHER INVESTIGATION REVEALED THAT THE #2 HYDRAULIC RESERVOIR WAS COMPLETELY DRY. THE ACCUMULATOR WAS DISASSEMBLED AND INSPECTED REVEALING THAT THE PISTON O-RING HAD SPLIT THE O-RING WAS REVEALED AND THE REASSEMBLED ACCUMULATOR RETURNED TO					
BELL		HOUSING	STRIPPED	06/12/2001 8864	
206B		206040236017	GEARBOX	JJWA073276	
STUD PULLED OUT WITH LESS THAN 50 INCH POUND ON TORQUE WRENCH WHEN INSTALLING FW UNIT IN ENGINE - HIDDEN DAMAGE NOT FOUND BY BELL CSF OVERHAUL FACILITY. NEW HOUSING SENT BY CSF.					
BELL	ALLSN	ENGINE	MALFUNCTIONED	06/23/2001	
206B	250C20		NACELLE	2001FA0000300	
DEPARTING THE AIRPORT, THE ENGINE FLAMED OUT OR SURGED. THE ENGINE WAS RUN ON A TEST CELL. TEST CELL SHOWED: 1) A CYCLING ANTI-ICE VALVE SOLENOID. 2) A RICH FUEL FLOW. 3) A WARPED OUTER COMBUSTION CHAMBER. THIS TOGETHER, COULD CAUSE A SURGE.					
BELL	ALLSN	BLADE	DENTED	07/23/2001 106	
206B	250C20	206016201133	TAIL ROTOR	CA010810005	
(CAN) DURING A DAILY INSPECTION THE PILOT NOTICED A DENT ON THE LEADING EDGE OF THE NOTED T/R BLADE. UPON INSPECTION THE DAMAGE WAS MEASURED AND FOUND TO BE IN LIMITS. FURTHER TO THE INVESTIGATION IT WAS FOUND THAT A SCREW HAD COME LOOSE FROM THE GEARBOX FAIRING INTO THE T/R BLADE PATH. NO OTHER					
BELL	ALLSN	TURBINE	DAMAGED	09/18/2001 808	
206B3	250C20B	6886407	TURBINE SECTION	HEEA075929	BOLT BROKEN OFF
IN #6&7 JET MOUNT. WHEEL BLADES SULPHIDATED DUE TO OVERTEMP OF 930 DEGREES ON 2-23-00. PARTS WERE FOUND TO BE ACCEPTABLE WHEN INSPECTED FOR OVERTEMP. PART SCRAPPED. REPLACED WITH SERVICEABLE PART.					
BELL	ALLSN	TURBINE	DAMAGED	09/18/2001 808	
206B3	250C20B	6898782	ENGINE	HEEA075930	BOLT BROKEN OFF
IN 6&7 JET MOUNT. WHEEL BLADES SULPHIDATED DUE TO OVERTEMP OF 930 DEGREES ON 2-23-00. PARTS WERE FOUND TO BE ACCEPTABLE WHEN INSPECTED FOR OVERTEMP. PART SCRAPPED. REPLACED WITH					
BELL	ALLSN	BELL	TRUNNION	CRACKED	07/12/2001
206B3	250C20B	206011810	206011812001	TAIL ROTOR HEAD	AUS20010893 2400
(AUS) TAIL ROTOR TRUNNION SUSPECT CRACKED. TRUNNION GAVE A POSITIVE CRACK INDICATION USING BOTH MPI AND FPI INSPECTIONS.					
BELL	ALLSN	FITTING	CRACKED	08/19/2001	
206L	250C20R	206031329103S	TAILBOOM	CA010912003	
(CAN) ROUTINE INSPECTION UPPER LEFT TAIL ATTACH FITTING FOUND CRACKED. REPLACED AS PER BELL STRUCTURAL REPAIR MANUAL 6-214, BUT NUMEROUS REPORTS OF CRACKS IN THIS LH UPPER FITTING AREA OF TAILBOOM/FUSELAGE INTERFACE.					
BELL	ALLSN	BELL	BLADE	TORN	08/14/2001 2585
206L1	250C28B	206011810013	TAIL ROTOR	CA010827009	
(CAN) WHILE IN FLIGHT THE T/R COULING FILLER COVER DEPARTED AND STRUCK THE TAIL ROTOR BLADE CAUSING A 2 CM TEAR OR HOLE IN ONE BLADE ABOUT 2/3 OF THE WAY DOWN. JUST AFT OF THE LEADING EDGE. THE A/C LANDED SAFELY. NO OTHER DAMAGES WERE FOUND. NEW COVER TO T/R ASSY INSTALLED A/C RETURNED TO SERVICE.					
BELL		ATTACH	MISMANUFACTURE	09/10/2001	
206L3		206031329103S	TAILBOOM	HEEA075961	
FITTING WILL NOT SIT FLAT AGAINST TAILBOOM RING. FITTING IS NOT MACHINED FLAT AND HAS A SLIGHTLY ROUNDED CONTOUR SO THERE IS A GAP AROUND THE PERIMETER OF THE FACE OF THE FITTING. ALSO FOUND FITTING TO BE APPROXIMATELY .30 THICKER AT THE TAILBOOM ATTACH BOLT HOLE. SENT TO BELL HELICOPTER					
BELL	ALLSN	BENDIX	SPRING	DEFECTIVE	07/27/2001
206L3	250C30P		CONTROL ARM	2001FA0000301	1694
THE FUEL CONTROL OVERCENTER SPRING IS SO STRONG THAT IT WILL RUN THE RPM AND TORQUE UP UNCOMMANDED. THIS TIME IT CAUSED AN OVER TORQUE OF 115 PERCENT FOR 1 SECOND.					

BELL		CONNECTOR	SHORTED	09/24/2001	
212		M39012160004	NR 1 VHF RADIO	HEEA076050	
PRIOR TO TAKEOFF, SMELLED ELECTRICAL "BURNING" ODOR. MAINTENANCE FOUND WIRING HARNESS FROM NR 1 VHF RADIO TO BULKHEAD FITTING SHORTED AT CANNON PLUG.					
BELL	PWA	BELL	STUD	MISSING	09/10/2001
212	PT6T3B	212040001059	209040110015	TRANSMISSION	CA010911002
(CAN) FOUND BOKEN OFF STUD ON THE LIFT LINK TRANSMISSION MOUNT. ON THE TRANSMISSION THE LEFT REAR STUD HAD BROKEN OFF. THEY FOUND THIS DEFECT WHILE CHANGING A SERVO.					
BELL	LYC	HOSE	DETERIORATED	09/26/1999	12261
214B	T5508D	700607000230	HYD SYSTEM	CA010921003	12261
(CAN) OIL SOAKED HOSE CLAMP CAUSED RUBBER TO DETERIORATE ON THE HOSE CLAMP WHICH CAUSED THE STEEL BRADING AROUND THE HOSE TO ERODE, THUS CAUSING THE HOSE TO LEAK.					
BELL	PWA	WINDOW	FAILED	08/27/2001	
412	PT6T3	412670101	COCKPIT	AUS20010939	
(AUS) LT SLIDING DOOR REAR WINDOW FAILED. MINOR DAMAGE TO HF RADIO ANTENNA CONNECTOR AND HORIZONTAL STABILISER.					
BELL	PWA	ENGINE	STALLED	10/09/2001	20429
412	PT6T3B		NACELLE	HEEA076258	
COMPRESSOR STALLS ABOVE 85 PERCENT N1 AND OVERTEMP (PEGGED OUT GAUGE). SENT TO PRATT AND WHITNEY FOR INSPECTION AND REPAIR.					
BELL		BEARING	RATCHETING	06/12/2001	
430		430310461101	SWASHPLATE	AC2A075803	
WITH SWASHPLATE INSTALLED ON ACFT. BEARING FELT RATCHETY. BEARING WAS THE NEW UPDATED STLYE. REMOVED AND REPLACED BEARING.					
BELL		PIN	BROKEN	06/12/2001	3447
430		MS1652245	MAIN ROTOR	AC2A075804	FOUND SHEAR
RESTRAINT LOOSE AND UPON DISASSEMBLY FOR INSP. FOUND PIN BROKEN. REPLACED BROKEN PIN AND WORN RESTRAINT.					
BELL		RESTRAINT	LOOSE	06/12/2001	585
430	430010100113	430310101107	MAIN ROTOR	AC2A075805	
FOUND LOOSE ON INSP. AND UPON DISASSEMBLY FOUND ROLL PIN BROKEN WHICH ALLOWED MOVEMENT IN CLAMP-UP. REPLACED RESTRAINT AND PIN.					
BELL	ALLSN	ENGINE	DAMAGED	08/21/2001	
430	250C*		NR 2	AC2A075840	
DURING A DAILY SERVICEABILITY CHECK THE NR 2 ENGINE WAS FOUND TO BE DAMAGED. SUSPECT CAUSE OF DAMAGE WAS THE FAILURE OF CAMLOC BLADE ASSY P/N: 40G2-1. THE ENGINE WAS DISASSEMBLED . THE COMPRESSOR WAS REMOVED AND DISASSEMBLED, THE TURBINE ASSY REMOVED. THE COMPRESSOR SCROLL WAS REMOVED AND SENT					
BELL	ALLSN	BLEED VALVE	LOOSE	07/02/2001	374
430	250C40B	23005366	ENGINE	AC2A075814	
POWER ASSURANCE LOW NR 1 ENGINE. FOUND NR 1 ENGINE BLEED VALVE BODY BOLTS LOOSE. REPLACED WITH REPAIRED BLEED VALVE.					
BOLKMS	LYC	TUBE	CRACKED	08/26/2001	
BK117A3	LTS101650B1	430137601C	FUEL MANIFOLD	A244583	
MINUTE CRACK DEVELOPED IN MANIFOLD RIGID TRANSFER TUBE, CAUSING INFLIGHT FUEL LEAK. ALLOW USE OF FLEXIBLE TRANSFER TUBE FUEL MANIFOLDS ON LTS101650B1.					
BOLKMS	LYC	MODULATOR	LOOSE	09/19/2001	
BK117B2	LTS101600A	430110217	AIRFLOW	2001FA0000312	
WHILE TROUBLESHOOTING ENGINE FOR SURGING PROBLEM. AIRFLOW MODULATOR WAS CHANGED. FILTER ELBOW HAS TO BE TRANSFERED TONNEW MODULATOR. FOUND FILTER SCREEN TO BE LOOSE INSIDE ELBOW AT THIS TIME. BROKEN FILTER HAD NO EFFECT ON THIS SURGINGPROBLEM. MUST INSPECT FILTER ELBOW WHEN CHANGING					
BOLKMS		SHAFT	LEAKING	07/18/2001	
BO105A		4638302093	FREEWHEEL UNIT	ERAA074827	FREEWHEEL
SHAFT IS CAUSING INPUT SEAL TO LEAK. NEEDS SPECIAL COATING REPLACED. WAS PURCHASED NEW 2/14/00. RETURNING ON ERA REPAIR ORDER 885185 REQUESTING WARRANTY EXCHANGE.					
BOLKMS		GEARBOX	DAMAGED	07/20/2001	2837
BO105S		4619002003	TAIL ROTOR	ERAA074828	
BEARINGS SCORED AND INPUT BUSHING FRETTING. DISASSEMBLED, VISUALLY INSPECTED. REPLACED ALL FIVE BEARINGS, INPUT BUSHING, ALL O RINGS, ALL SEALING RINGS, BOTH SEALS, ONE SCREW AND THE LOCKING PLATE. REASSEMBLED, SET GEAR DISTANCE, BACKLASH & PATTERN PRO-SEALED. REPAIRED IAW BO-105 REM-304. COMPLIED WITH ASB BO-105-30-111. COPY SENT TO AMERICAN EUROCOPTERCORP.					
BOLKMS		SHAFT	LEAKING	08/09/2001	615
BO105S		4638302093	FREEWHEEL UNIT	ERAA075875	
FREEWHEEL SHAFT LEAKS. WAS SENT TO ZF FOR OVERHAUL 1/26/01 AND WAS INSTALLED ON AIRCRAFT 8/04/01. AFTER 18.2 HRS, UNIT CAUSING INPUT SEAL TO LEAK. SPECIAL COATING WORN. RETURNING TO ZF ON ERA REPAIR ORDER RW-885574 REQUESTING WARRANTY REPAIR.					
CESSNA	LYC	SHAFT	SHEARED	08/29/2001	521
172K	O320*		MAGNETO	2001FA0000363	
PILOT REPORTED 700 RPM DROP ON LEFT MAGNETO. MAGNETO REMOVED AND INSPECTED. FOUND DRIVE SHAFT/ MAGNETO/ ROTOR SHEAREDIN HALF. MAGNETO REPLACED.					
CESSNA	LYC	STRINGER	CRACKED	08/23/2001	13201
172K	O320E2D	05131324	FUSELAGE	CA010907010	
(CAN) DURING ROUTINE MAINTENANCE INSPECTION, IT WAS DISCOVERED THAT THE RIGHT HAND ENGINE RAIL WAS CRACKED. P/N 0513132-4 STRINGER ASSEMBLY IN FUSELAGE FRONT SECTION STRUCTURE ASSEMBLY WAS REPLACED.					
CESSNA	LYC	CRANKCASE	CRACKED	09/12/2001	
172N	O320*	LW16819	ENGINE	2001FA0000358	
ENGINE FOUND TO BE CRACKED. THE FRACTURE OCCURRED ON THE LEFT HAND CASE HALF RUNNING FROM THE 9 OCLOCK POSSITION OF THE NR 2 CYLINDER PAD TO THE MAIN BEARING BOSS AREA. THIS CRACK WAS CAUSED BY POOR SCAVENGING OF AIR DURING THE CASTING PROCESS.					
CESSNA		BUSS	DAMAGED	09/24/2001	870
172R			ELECTRICAL	2001FA0000352	
PILOT REPORTED LOSS OF HALF OF AVIONICS BUSS, INCLUDING ONE NAV/COM AND GPS AND SMOKE AND A BAD ODOR IN THE COCKPIT.WIRE NR 2H1002 (22 GAUGE) BURNED FROM THE NAV. LIGHT C/B SWITCH TO PIN 11 OF THE JC001 CONNECTOR AND FROM PC001, PIN 11 TO JV001, PIN 1. THE RED LEAD FROM THE TAIL NAV LIGHT ASSEMBLY SHORTED OUT TO A NUT-PLATE ON THE RUDDER THAT HOLDS THE RUDDER TIP ON, BUT DOES NOT DISPLAY EVIDENCE OF OVERHEATING, OTHER THAT THE PINHEAD SIZED BURN MARK.					

CESSNA		WIRE	BURNED	09/27/2001	874
172R		2H1002	NAVIGATION	2001FA0000378	

PILOT REPORTED LOSS OF HALF AVIONICS BUSS, SMOKE AND BAD ODOR IN COCKPIT. T/S, FOUND WIRE BURNT FROM NAV LIGHT C/B SWITCH TO PIN 11 OF THE JC001 CONNECTOR AND FROM PC001, PIN 11 TO JV001, PIN 1. RED LEAD FROM TAIL NAV LIGHT HOUSING SHORTED OUT TO NUT-PLATE ON RUDDER THAT HOLDS RUDDER TIP ON, BUT DOES NOT DISPLAY EVIDENCE OF OVERHEATING, OTHER THAN PINHEAD SIZED BURN MARK. SEVERAL OTHER WIRES WERE DAMAGED WHEN WIRE NR 2H1002 MELTED. NOTE: ALL THREE NAV-LAMPS FEED INTO A SINGLE TWO FOOT LENGTH OF 22 GAUGE WIRE BEFORE CONNECTING THE 5 AMP BREAKER. MOST OF LENGTH OF WIRE TO TAIL IS DAMAGED, LAST SECTION TO BREAKER IS BURNED BARE. THIS SECTION THAT MELTED INTO ADJACENT WIRES IN BUNDLE. ONCE

CESSNA	LYC	INJECTOR	MALFUNCTIONED	08/21/2001	
172R	IO360L2A		ENGINE	2001FA0000309	

ENGINE FAILED TO DEVELOP FULL POWER AFTER LONG POWER OFF DECENT AT HIGH DENSITY ALTITUDE CONDITIONS. CORRECTIVE ACTIONS TAKEN: FUEL INJECTOR SERVO REPAIRED BY CRS/NE2R WO R01-042240. FLOW DIVIDER MODIFIED IAW SI. C/W SI AND SB.

CESSNA	LYC	CESSNA	BRUSHES	FAILED	08/02/2001	472
172R	IO360L2A	991059111		ALTERNATOR	CA010831012	

(CAN) - AIRCRAFT ALTERNATOR FAILED. - ALTERNATOR INTERIOR INSPECTION REVEALED A BROKEN BRUSH BLOCK ASSEMBLY CAUSED BY AINCORRECT INSTALLATION.

CESSNA	LYC	CESSNA	BRUSHES	BROKEN	08/16/2001	445
172R	IO360L2A	9910591111	9910591111	ALTERNATOR	CA010831013	

(CAN) - AIRCRAFT ALTERNATOR FAILED. - ALTERNATOR INTERIOR INSPECTION REVEALED A BROKEN BRUSH BLOCK ASSEMBLY CAUSED BY AINCORRECT INSTALLATION

CESSNA	LYC		BOLT	MISSING	09/06/2001	4577
172RG	O360F1A6			BRAKE CYLINDER	2001FA0000382	

LEFT LANDING GEAR WOULD NOT EXTEND IN FLIGHT. AIRCRAFT WAS HOISTED UP AND THE GEAR EXTENDED AND LOCKED. FOUND A BOLT MISSING FROM THE LEFT BRAKE CYLINDER. PERFORMED SEVERAL GEAR RETRACTIONS AND OPS CHECKED OK.

CESSNA	LYC		BUSHING	FAILED	08/13/2001	137
172RG	O360F1A6		24900022	GEAR ACTUATOR	2001FA0000337	

BUSHING , INSTALLED ON MAIN GEAR ACTUATOR AS PART OF AD, HAS WORKED ITS WAY OUT OF HOUSING. PART HAS 137 HOURS SINCE INSTALLED. THIS IS SECOND BUSHING FOUND BAD WITH FEW HOURS.

CESSNA	LYC		PIVOT	BROKEN	07/30/2001	921
172RG	VO360*		244110010	RT MLG	2001FA0000338	

RIGHT MAIN LANDING GEAR PIVOT PN 24411001-10 BROKEN, SHEARING OFF GEAR FROM PIVOT. THIS PART WAS INSTALLED ON 01/20/2000, BEING THE NEW IMPROVED PIVOT. ON 05/28/2001 PIVOT WAS INSPECTED AND DYE PENETRANT FOR CRACKS PER AD AND SB. SERVICE KIT 172-151 INSTALLED. 113 HOURS LATER ON 07/27/2001 PIVOT BROKE. AIRCRAFT LANDED WITH NO DAMAGE.

CESSNA			SPINNER	DAMAGED	08/24/2001	
172S			055032110	PROPELLER	2001FA0000325	

NUTPLATE BROKEN OFF. CHANGED NUMEROUS SPINNERS AND BACK PLATES BECAUSE THE PRE-DRILLED HOLES DO NOT LINE UP WITH THE NUTPLATES ON THE SPINNER BACK PLATE. THIS IS A COMMON PROBLEM WITH THIS A/C

CESSNA	LYC		INJECTOR	CLOGGED	10/08/2001	597
172S	IO360L2A		LW18265	ENGINE	2001FA0000395	27

PILOT REPORTED THAT DURING CLIMBOUT THE ENGINE BEGAN RUNNING ROUGH, AT WHICH TIME HE RETURNED TO THE AIRPORT (PHX). TECHNICIAN COULD NOT DUPLICATE THE MALFUNCTION ON A GROUND RUN UP. THE FUEL INJECTOR NOZZLES WERE REMOVED & INSPECTED AND THE NR 2 INJECTOR WAS FOUND TO BE PLUGGED. THE INJECTOR NOZZLES WERE CLEANED & REINSTALLED. THE ENGINE RUNUP WAS NORMAL AND SMOOTH, AND THE AIRCRAFT WAS FLOWN BACK TO PHOENIX.

CESSNA	LYC		BULKHEAD	CRACKED	07/11/2001	72
172S	IO360L2A		055032110	SPINNER	2001FA0000388	

THE AREA AROUND THE NUTPLATE NEAREST TO THE PROPELLER ON THE AFT SPINNER BULKHEAD HAD CRACKED AND BROKEN FREE OF THE BULKHEAD IN FLIGHT. THE SECTION OF THE SPINNER ATTACHED TO THE BROKEN PIECE WAS PULLED AWAY FROM THE BULKHEAD. THE SPINNER HAD STARTED TO DEVELOPE CRACKS ALONG THE BEND RADIUS. BOTH THE SPINNER AND AFT SPINNER BULKHEAD WERE REPLACE WITH FACTORY NEW.

CESSNA	LYC		PANEL	LOOSE	09/09/2001	
177B	O360*			TRANSPONDER	2001FA0000379	

OWNER/OPERATOR REPORTED THAT CONTROL YOKE WOULD NOT PULL BACK TO RAISE THE ELEVATOR. ON INSPECTION IT WAS FOUND THAT THE PANEL MOUNT TRAY FOR THE TRANSPONDER ON THE RIGHT SIDE OF THE PANEL HAD DROPPED .2500 OF INCH AND WAS CONTAINING AND RESTRICTING AFT MOVEMENT OF THE CONTROL YOKE. THE AIRCRAFT COULD NOT ROTATE ON TAKEOFF AND IT WAS A CLOSE CALL. AN ADDITIONAL SUPPORT WAS INSTALLED ON THE BACK OF THE TRAY. AVIONICS INSTALLER OVER-LOOKED THE POSSIBILITY OF THE TRAY DROPPING DOWN. UNDER PANEL AREA SHOULD BE INSPECTED AT EACH ANNUAL, 100 HOUR AND AFTER NEW

CESSNA	LYC		SWITCH	INOPERATIVE	09/18/2001	548
182S	IO540*		S2870	PILOT PTT	2001FA0000386	

THE PILOTS SIDE PUSH TO TALK SWITCH WENT BAD WITH ONLY 548.0 TACH TIME. REPLACE THE BAD SWITCH WITH A NEW ONE. THE NEW SWITCH WAS BAD ALSO, THEN REPLACED THE NEW SWITCH THE SECOND NEW SWITCH TESTED OK. WHEN INSTALLING SWITCHES, WAS CAREFUL NOT TO OVERHEAT SWITCH.

CESSNA	CONT		SPAR	CRACKED	08/23/2001	
185F	O470R		07310292	VERTICAL STAB	AUS20010934	

(AUS) VERTICAL STABILISER REAR SPAR ASSEMBLY CRACKED IN TWO AREAS ADJACENT TO THE FUSELAGE BULKHEAD ATTACHMENT POINT.

CESSNA	PWA		TIRE	FAULTY	08/14/2001	
208B	PT6A114A		29X111010PR	MLG	AUS20010923	

(AUS) MAIN LANDING GEAR TYRE HAD EXCESSIVE SIDEWARDS DEFLECTION DURING LANDING CAUSING THE TYRE TO CONTACT THE BRAKE ASSEMBLY. TYRE SIZE 29X11.0X10 10PLY.

CESSNA	PWA		BOLT	DAMAGED	08/03/2001	3800
208B	PT6A114A		NAS148A94	ENGINE MOUNT	CA010831007	

(CAN) ON ENGINE REMOVAL, MAINTENACE FOUND ENGINE MOUNT BOLT PART NO. NAS 148A94 (S3461-64) AT LEFT, LOWER ENGINE MOUNT BRACKET. (ITEM 27)- THREADBOUND DUE TO WASHER PART NO. MS20002C8 NOT INSTALLED AT FACTORY ASSEMBLY. MAINTENACE ALSO FOUND INCORRECT WASHERS PART NO. AN960-616L INSTALLED ON ENGINE MOUNT BOLTS AT RIGHT LOWER BRACKET (ITEM 28) AND TOP CENTER BRACKET (ITEM 26)- INSTEAD OF WASHERS PART NO. MS20002C8. THE THREE REMAINING CESSNA 208B AIRCRAFT IN THE FLEET WERE INSPECTED FOR THE SAME CONDITION WITH NO DISCREPANCIES NOTED.

CESSNA		CESSNA	BOLT	CRACKED	08/08/2001	5891
210K			NAS464P4A29	MLG ACTUATOR	RFS20011	

WHILE REPLACING THE RT MLG ACTUATOR AS PART OF COMPLIANCE WITH CESSNA SEB01-2, IT WAS DISCOVERED THAT ONE OF THE THREE NAS ATTACH BOLTS WAS BROKEN.IT WAS ONLY BEING HELD IN PLACE BY THE SAFETY WIRE LINKING THE THREE BOLTS. THE BOLT HAD FAILED BETWEEN THE FIRST AND SECOND THREADS COUNTING FROM THE SHANK OF THE BOLT. PROCURED AND INSTALLED 3EA NEW NAS BOLTS TO CORRECT.

CESSNA	CONT	ALTERNATOR	FAILED	08/11/2001	446
305A	O47011	7565T1	ENGINE	CA010821005	151
(CAN) ALTERNATOR WENT OFF LINE. UPON REMOVAL OF THE ALTERNATOR WAS NOTICED THAT THE SPLINE GEAR WAS SHEARED. THE DRIVE SHAFT WAS ALSO SHEARED IN THE THREADED PORTION, JUST BELOW THE CASTLE NUT. THE CASTLE NUT WAS STILL INTACT ON THE TIP OF THE THREADED SHAFT WITH THE COTTER PIN INTACT. THIS PARTICULAR UNIT HAS BEEN SENT TO DND TEST FACILITIES TO DETERMINE THE EXACT CAUSE OF FAILURE.					
CESSNA	CONT	PIN	SHEARED	08/30/2001	
340CESSNA	TSIO520K	MS16562130	LANDING GEAR	AUS20011007	
(AUS) LANDING GEAR UPPER MANUAL EMERGENCY EXTENSION SYSTEM INTERCONNECT SHAFT SPROCKET ROLL PIN SHEARED.					
CESSNA	CONT	WASHER	MISSING	08/31/2001	
402CESSNA	TSIO520E	50450182	MAIN LANDING	AUS20010994	
(AUS) LH MAIN LANDING GEAR TORQUE LINK CENTRE PIVOT WASHER NOT FITTED. TORQUE LINKS SEPARATED ALLOWING AIRCRAFT TO GROUND LOOP.					
CESSNA	CONT	BEARING	BROKEN	08/20/2001	
404CESSNA	GTSIO520M	GTSIO520M	634503	RECIPROCATING	AUS20010974
(AUS) ENGINE MAIN BEARING BROKEN INTO THREE PIECES. METAL CONTAMINATION OF ENGINE.					
CESSNA	CONT	LINE	CHAFED	09/11/2001	4224
414A	TSIO520*	5100106159	BRAKE ASSY	2001FA0000380	
BRAKE LINE ROUTED UNDER THE CO-PILOT'S SEAT PEDESTAL AREA IS CHAFFING ON HEAT DUCT TUBING. SLIDING A 193-6 LOW PRESSURE HOSE OVER THE BRAKE LINE WILL KEEP THE BRAKE LINE FROM DEVELOPING A HOLE.					
CESSNA	CONT	TELEDYNE CRIT	DRIVE GEAR	DAMAGED	09/29/2001
421C	GTSIO520L	646655A1	ALTERNATOR	2001FA0000383	
L. ALTERNATOR FAILED DURING FLIGHT AND A VIBRATION WAS NOTED ABOUT 20 MINUTES LATER. THE ENGINE OIL PRESSURE DROPPED ABOUT 25 PSI AND A PRECAUTIONARY LANDING WAS MADE. UPON REMOVAL OF THE ALTERNATOR IT WAS DISCOVERED THE DRIVE HUB WAS NEARLY DESTROYED AND THE DRIVE GEAR BOLTS WERE MISSING AND THE GEAR WAS LOOSE ON THE BULLGEAR SHAFT. THE REMNANTS OF THE DRIVE GEAR WERE LOCATED IN THE OIL PAN ALONG WITH THE CASTLE NUT AND COTTER PIN. (SEE PHOTO) THIS IS THE SECOND OCCURRENCE OF THIS TYPE FAILURE IN THE PAST 2 WEEKS, THE OTHER WAS ON THE I. ENGINE OF A 421C WITH ABOUT 1400 HOURS ON THE ENGINE AND LESS THAN 100 HOURS ON THE ALTERNATOR SMOH. NEITHER ALTERNATOR EXHIBITED ANY					
CESSNA	PWA	LINE	DETERIORATED	08/20/2001	5390
425	PT6*	510010951	OXYGEN SYSTEM	2001FA0000320	
LEFT SIDE WALL WAS REMOVED TO INSTALL RADIO EQUIPMENT. THE VERTICAL DUCT FOR AIR TO OVERHEAD WEMAC SHOWED DEFINITE SIGNS OF BURNING AND SEVERE DETERIORATION. UPON FURTHER EXAMINATION, THE OXYGEN LINE CROSSING DUCT HAD SEVERE CORROSION WHERE CONTACT BETWEEN THE LINE AND DUCT HAD OCCURRED, AND HAD 2 HOLES IN THE LINE. WHEN THE OXYGEN WAS TURNED ON, OXYGEN WAS SPRAYED ON DUCT AND BEHIND SIDEWALL OF AIRCRAFT. MANUFACTURED NEW LINE TO REPLACE CORRODED LINE. INSTALLED NEW DUCT. SPIRAL WRAPPED OXYGEN LINE WHERE CONTACT WITH DUCT OCCURS.					
CESSNA	GARRTT	STARTER GEN	FAILED	08/23/2001	
441	TPE3318	23079004	RT ENGINE	CA010830007	84
(CAN) PILOT WAS TAXING WHEN HE LOST TOTAL POWER TO NO. 2 BUS. INVESTIGATION FOUND THAT THE R/H GENERATOR COOLING FAN BLADES TOTALLY CRACKED OFF AND FLEW INTO THE GENERATOR WINDINGS, DESTROYING ALL WORKING CAPABILITY OF STARTER GENERATOR. THIS CAUSED A GCU FAILURE AND A NO. 2 BUS CURRENT					
CESSNA	PWA	CESSNA	CLAMP	LOOSE	10/03/2001
500CESSNA	JT15D1A	CM357024	S189148	CLAMP	CA011004008
(CAN) CLIMBING THROUGH FLIGHT LEVEL 290, AIRCRAFT CABIN STARTED TO RAPIDLY CLIMB. FLIGHT CREW INITIATED A RAPID DESCENT TO 10,000 FEET. AIRCRAFT LANDED WITHOUT FURTHER INCIDENT. MAINTENANCE FOUND CLAMP ON CABIN BLEED AIR SUPPLY LINE LOOSE AND THE AIR SUPPLY LINE HAD BECOME DISCONNECTED. THE AIRCRAFT HAD RECENTLY HAD MAINTENANCE PERFORMED ON THE BLEED AIR SYSTEM. ALL OTHER CLAMPS IN THE BLEED AIR SYSTEM WERE CHECKED FOR SECURITY WITH NO FURTHER PROBLEM FOUND.					
CESSNA		STRINGER	DAMAGED	10/11/2001	9156
550		CM32091	FUSELAGE	2001FA0000397	9156
DURING AN AVIONICS INSTALLATION EVENT WITH THE AIRCRAFTS' INTERIOR REMOVED IT WAS NOTED THAT THE FUSELAGES' UPPER CROWNSKIN, ABOUT THE CENTERLINE HAD BEEN PREVIOUSLY MODIFIED AT ONE TIME TO "BLANK OUT" A ANTENNA INSTALLATION NO LONGER IN USE. EXTREMELY POOR WORKMANSHIP AND NON STANDARD PRACTICES WERE EXHIBITED IN THE INSTALLATION OF TWO INTERNAL DOUBLERS, THAT INCLUDED LARGE HOLES CUT IN THE UPPER CENTERLINE STRINGER ABOUT BL 0.00 AT APPROX. FUSELAGE STATION 240.00. THE TWO HOLES CREATED SIGNIFICANT VOIDS IN THE "T" S FLANGE, IN CONTACT WITH THE FUSELAGE SKIN, WHICH WERE					
CESSNA		LINE	CHAFED	09/28/2001	5921
650		6207010144	HYD SYSTEM	2001FA0000364	
THE AIRCRAFT WAS MANUFACTURED WITH THE HYDRAULIC PRESSURE AND RETURN LINES CONTACTING EACH OTHER. THE RETURN LINE EVENTUALLY WORE THROUGH AND STARTED TO LEAK, THE PRESSURE LINE WAS ALSO SEVERLY WORN AND REQUIRED REPLACEMENT. THE REPAIR IS EXTENSIVE BECAUSE THE LINES ARE SWAGED REQUIRING THE REPLACEMENT OF MANY LINES AND FITTINGS. NOT ALL OF THESE LINES ARE AVAILABLE FROM CESSNA. THE AREA WHERE THE LINES ARE IN CONTACT CAN BE VERY DIFFICULT TO INSPECT. IN MOST CASES THE AREAS ONLY VISIBLE WITH A MIRROR. THEY CHECKED ANOTHER CESSNA 650 THAT WAS IN THE SHOP AND IT HAD ONLY .010 BETWEEN THE LINES. IT WOULD BE ADVISABLE FOR OTHER OPERATORS OF THIS MODEL AIRCRAFT TO					
CESSNA	ALLSN	ACM	SEIZED	08/06/2001	1113
750	AE3007C	73838430	CABIN COOLING	2001FA0000342	
FORWARD AIR CYCLE MACHINE SEIZED DURING ROUTINE USAGE. PROBABLE CAUSE IS BEARING FAILURE. UNIT WAS OPERATED NORMALLY, AND WAS SERVICED AS SCHEDULED.					
CESSNA	LYC	TUBE	DISCONNECTED	09/20/2001	
A185F	TIO540*	3190	FLOAT PUMP	2001FA0000362	
ONE AFT COMPARTMENT PUMP OUT TUBE WAS DISCONNECTED NOT ALLOWING THE WATER TO BE PUMP FROM FLOAT. AIRCRAFT SWAMPED RIGHT FLOAT ON TURN AND STARTED TO SINK.					
CESSNA	CONT	PISTON	DAMAGED	02/14/2001	
R172K	IO360K		ENGINE	AUS20010938	
(AUS) NR 2 CYLINDER PISTON HOLED IN AREA OF RING GROOVES. EXCESSIVE CRANKCASE PRESSURE VENTED OIL THROUGH THE BREATHER. LOSS OF OIL PRESSURE CAUSED NR 1 CYLINDER CONNECTING ROD BIG END FAILURE. INVESTIGATION FOUND A PIECE OF BROKEN PISTON RING HAD BEEN WORKING IN THE RING GROOVE CAUSING FAILURE					
CESSNA	LYC	CONTACTOR	FAILED	08/22/2001	138
R182	O540*	S1577A1	STARTER	2001FA0000311	
CONTACTOR FAILED/ CLOSED CAUSING STARTER TO BURN OUT. THIS IS SECOND FAILURE OF A NEW CONTACTOR IN LESS THAN 140 HOURS. (ONE STARTER CONTACTOR, ONE MASTER CONTACTOR)					

CESSNA S550	PWA JT15D4	VALVE 99123057	FAILED BRAKE	09/12/2001 CA010913004	7984	
(CAN) FOLLOWING AN UNEVENTFUL LANDING AND WHILE TAXING AFTER THE LANDING ROLL OUT, THE CREW ENCOUNTERED A BRAKE FAILURE AND HAD TO APPLY THE EMERGENCY BRAKE IN ORDER TO STOP THE AIRCRAFT. MAINTENANCE TROUBLESHOOTING AND INSPECTION OF THE SYSTEM DETERMINED THAT THE POWER BRAKE -ANTI SKID VALVE ASSEMBLY HAD FAILED. THE VALVE ASSY WAS REPLACED AND ALL TESTS CONDUCTED IN ACCORDANCE WITH THE MM AND THE AIRCRAFT RELEASED.						
CESSNA T210L	CONT TSIO520*	RIB	CRACKED LEFT WING	09/20/2001 2001FA0000361	3505	
LEFT WING RIB CRACKED WHERE LEFT FLAP BELL CRACK SUPPORT BRACKETS ARE MOUNTED, CRACK RUNS FROM INBOARD LOWER SUPPORT BRACKET RIVET HOLE APPROX. ONE(1) INCH IN LENGTH DOWN AND TO THE LEFT. PROBABLE CAUSE: FLAPS EXTENDED AT TOO HIGH OF AN AIRSPEED.						
CESSNA TU206G	CONT TSIO520M	SLICK 6310	DISTRIBUTOR M3820	BURNED MAGNETO	08/09/2001 CA010827004	106
(CAN) BOTH MAGNETOS WERE REMOVED IN ERROR FOR 500 HR INSP ONLY LH WAS DUE WHEN RH MAGNETO WAS DISASSEMBLED BY LEGGAT AVIATION. THE BEARING BAR P/N M3004 WAS BURNED THROUGH AT HIGH TENSION BRUSH AREA OF DISTRIBUTER BLOCK NO PROBLEM WAS EVER FOUND ON MAGNETO CHECK.						
CESSNA U206G	CONT IO550F	ARM 0411307	CRACKED RUDDER	08/13/2001 CA010821011	2965	
(CAN) DURING A 200 HOUR ANNUAL INSPECTION, THE PILOT R/H RUDDER PEDAL ARM FOUND LOOSE. THE ARM WAS CRACKED IN TWO PLACES: FROM EACH OF THE ATTACH BOLT HOLES TO THE BOTTOM OF THE TUBE.						
CESSNA U206G	CONT IO550F	TUBE	LEAKING FUEL SYSTEM	08/17/2001 CA010831006		
(CAN) NR 5 CYLINDER FUEL DISTRIBUTION TUBE RUPTURED DURING CRUISE FLIGHT. TUBE BREAK IS AT THE CONNECTION TO FUEL DISTRIBUTOR VALVE. CONNECTION POINT A CYLINDER REMAINED INTACT. FAILURE OCCURRED AT FLANGE END WHERE TUBE FLARE END IS BRAZED TO TUBE ASSY. NO POSITIVE CAUSE IDENTIFIED. VIBRATION AND CYCLES MAY HAVE CONTRIBUTED TO FAILURE. POSSIBLE FLAW WITH BRAZING OF TUBE ASSY.						
CIRRUS SR20		MOUNT	DAMAGED ENGINE	08/29/2001 2001FA0000327	144	
MADE A HARD LANDING, THE AIRCRAFT HAD PORPOISED HITTING HARD ON 2ND OSC. UPON INSPECTION IT WAS FOUND THAT THE LDG SHOCK PUCKS WERE DEFORMED AND THE REBOUND PUCKS, ONE OF WHICH WAS MISSING, WITH THE MOUNT WASHERS BENT. ALSO, THE SHOCK PUCK MOUNT PLATE STUD'S WERE BENT, CLOSER INSPECTION REVEALED LIND SEED OIL AT THE WEB CLUSTER ADJACENT TO THE SHOCK MOUNT PLATE OF THE DIAGONAL SUPPORT TUBE, SHOCK MT SUPPORT TUBE AND A STIFFENER TUBE A DYE-PIN INSPECTION REVEALED A .5 INCH						
GROB G115C	LYC O360A1F6	HOSE	CHAFED AIR DISTRIBUTION	05/09/2001 AUS20010877		
(AUS) AVIONICS COOLING SCAT HOSE CHAFED ON PRINTED CIRCUIT BOARD. HOSE INNER WIRE SHORT CIRCUITED CAUSING HOSE TO BURN.						
GULSTM 500S	LYC IO540E1A5	PLATE	CORRODED WING, PLATES/SKI	09/21/2001 AUS20011017		
(AUS) EXTERNAL SPAR CAP SUPPORT PLATE RH SIDE CORRODED IN AREA OF JOINT BETWEEN TWO PLATES. EVIDENCE OF CORROSION IN SIMILAR AREA ON LH SIDE.						
HUGHES 369D	ALLSN 250C20B	GEARBOX 369D25400B	MAKING METAL TAIL ROTOR	09/05/2001 CA010912018	13075 426	
(CAN) DURING A HELICOPTER ENGINE PERFORMANCE CHECK AT 2000 FT CRUISE, THE TAIL ROTOR GEARBOX CHIP LIGHT ILLUMINATED AND STAYED LIT. AFTER LANDING AT BASE, THERE WAS METAL FLAKES PRESENT ON CHIP DETECTOR. T/R GEARBOX WAS FLUSHED, CHIP DETECTOR CLEANED, & RE-INSTALLED. AIRCRAFT WAS GROUND RUN FOR 10 MIN AND SHUTDOWN. T/R GEARBOX CHIP DETECTOR REMOVED AGAIN. METAL WAS FOUND ON DETECTOR - T/R GEARBOX REMOVED FROM AIRCRAFT.						
HUGHES 369FF	ALLSN 250C30	BOLT NAS620425	BROKEN T/R GEARBOX	07/26/2000 CA010921004	1200	
(CAN) - TAIL ROTOR GEARBOX RETENTION HARDWARE, BOLT HEAD FOUND MISSING DURING SCHEDULED MAINTENANCE. - 3 REMAINING BOLTS WERE INSPECTED WITH NO FAILURES FOUND. ALL THE TAIL ROTOR GEARBOX RETENTION HARDWARE WAS REPLACED WITH NEW. A 300 HOUR RETIREMENT SCHEDULE HAS BEEN ESTABLISHED FOR						
LEAR 35LEAR	GARRTT TFE73122B	KIDDE 896H16	BONDING MS250832DE5	FAILED OTBD CONNECTOR	09/07/2001 CA010914007	
(CAN) DURING CRUISE PILOTS NOTICED RT ENGINE FIRE INDICATION, FIRED BOTH BOTTLES AND DID EMERGENCY LANDING IN JFK AIRPORT. AFTER VISUAL INSPECTION OF RT ENGINE FIRE DETECTION SYSTEM, THE OUTBOARD CONNECTOR ON THE GEARBOX FIRE LOOP WAS FOUND TO BE IN LOOSE. CONNECTOR RE-SECURED AND FIRE DETECTION SYSTEM FUNCTION CHECK C/O, NO FAULT. REF: LEAR 35/36 IPC 26-10-30						
LEAR 45LEAR	GARRTT TFE731*	LUCAS	BEARING STARTER GEN	FAILED 2001FA0000348	07/27/2001 679	
AIRCRAFT EXPERIENCED RIGHT GENERATOR FAILURE. GENERATOR LINE CONTACTOR FAILED TO OPEN AUTOMATICLY AND CREW WAS UNABLE TO SELECT GENERATOR OFF. RIGHT AIRCRAFT MAIN POWER BUSS EXPERIENCED SPIKING WHICH RESULTED IN DAMAGING 3 OR THE MAIN POWER DISTRIBUTION PANELS ALONG WITH MELTING THE SOLDER OUT OF THE STARTER/GENERATOR SPEED PICKUP CONNECTOR. CREW ENDED UP HAVING COMPLETE LOSS OF RIGHT MAIN BUSS AND ASSOCIATED SYSTEMS.						
LEAR 60LEAR	PWA PW305A	LINE 6000100369	FAILED HYD SYSTEM	09/27/2001 2001FA0000343	661	
LEFT HYDRAULIC PRESSURE LINE FROM ENGINE TO HYDRAULIC MANIFOLD BROKE AT FLARE. 3 MILE FINAL EMPTIED HYDRAULIC RES INTO EQUIPMENT BAY/BAGGAGE COMPT. LINE REMOVED AND SENT TO MFG FOR EVALUATION. NOTE: RIGHT HYDRAULIC PRESSURE LINE REMOVED AND REPLACED AS WELL AND SENT IN FOR EVALUATION.						
MTSBSI MU2B36A	GARRTT TPE3315	BOLT 030A39313	CRACKED NLG	08/09/2001 CA010813024		
(CAN) THE NOSE LANDING GEAR DRAG STRUT ATTACH BOLT WAS FOUND CRACKED AT SCHEDULED NDT INSPECTION OF BOLT. THIS BOLT HAD BEEN MAGNETIC PARTICAL INSPECTED EVERY 2000 HOURS.						
PIPER PA18	LYC O320A2B	PIPER 4269200	SCREW 4296102	BROKEN STABILIZER	07/27/2001 CA010820014	2725
(CAN) STABILIZER TRIM FOUND NOT WORKING ON PILOT'S WALK AROUND. DISASSEMBLE AND FOUND SCREW BROKEN IN HALF, JAMMED IN THE YOKE HOUSING.						
PIPER PA23250	LYC IO540*	CABLE 3138400	BROKEN TANK SELECTOR	08/17/2001 2001FA0000355		
CABLE BROKE JUST BELOW SWIVEL FITTING OR THE RIGHT WING FUEL TANK SELECTOR HANDLE. RECOMMEND THAT THE AD INCLUDE THE FUEL SELECTOR CABLE ALSO BE INSPECTED.						

PIPER	LYC	BOLT	BROKEN	08/06/2001	9000
PA23250	IO540*	PA402427	DRAGLINK	2001FA0000331	
BOLT SHEARED IN HALF, ALLOWING RIGHT MAIN LANDING GEAR TO COLLAPSE ON LANDING ROLL. BOLT SUSPECTED TO BE ORIGINAL.					
PIPER	LYC	INDICATOR	FAILED	06/26/2001	
PA23250	IO540C4B5		MLG	CA010817003	
(CAN) WHILE LANDING THE LT WHEEL LIGHT DID NOT COME ON. AFTER VERIFICATION WITH THE MIRABLE TOWER WHO CONFIRMED 3 WHEELS OUT. THE AIRCRAFT RETURNED TO ST-HUBERT WITH THE LANDING GEAR DOWN. THE LIGHT CAME ON WHILE ONROUTE TO ST-HUBERT. 2 ELECTRICAL TERMINALS WERE REPLACED AND THE GROUND WAS CLEANED FOLLOWED BY MANY RETRACTIONS AND THE SYSTEM WAS CHECKED SERVICEABLE.					
PIPER	LYC	CLEVELAND	DISK	WORN	07/16/2001
PA23250	IO540K1A5	16405700	16405700	BRAKE	AUS20010869
(AUS) BRAKE DISCS WORN BELOW MINIMUM THICKNESS. BOTH DISCS ALSO EXHIBITED EVIDENCE OF RADIAL HEAT STRESS CRACKING.					
PIPER		TAPE	LOOSE	08/20/2001	
PA28140			CARB SHROUD	2001FA0000366	
PILOT COMPLAINED OF ROUGH RUNNING ENGINE LOW STATIC RPM ONLY OBTAINABLE BY LEANING MIXTURE, FOUND APPROX 1 SQUARE INCH OF TIN FOIL LODGED IN CARB VENTURI, EXAMINATION OF HEAT SHROUD ON EXHAUST PIPE RUB AREA WAS WRAPPED WITH ALUMINUM FOIL TAPE TO TAKE UP PLAY, MORE LOOSE FOIL READY TO DISLODGE AND MAKE ITS WAY TO SNUFF AIR IN CARB. (M)					
PIPER	LYC	EXHAUST	FAILED	06/25/2001	1147
PA28181	O360A4M		ENGINE	2001FA0000368	
THE AIRCRAFT WAS AT NORMAL CRUISE, THE PILOT STATED THAT IT STARTED TO LOSS POWER AND RAN ROUGH. AFTER LANDING AT A ALTERNATE AIRPORT THE AIRCRAFT STOPPED RUNNING. AFTER PULLING THE CYLINDER, THE TOP OF THE EXHAUST VALVE WAS MISSING. THE STEM AND RETAINING CLIPS WERE STILL IN PLACE. THE TOP OF THE VALVE HAD BEEN FOUND IN THE INTAKES. CAUSE OF THE MALFUNCTION UNKNOWN. TOTAL TIME ON THE					
PIPER	LYC	CONTROL UNIT	LOOSE	05/15/2001	
PA31350	TIO540J2BD		AILERON	AUS20010903	
(AUS) AILERON CONTROL SYSTEM HAD EXCESSIVE PLAY. INVESTIGATION FOUND UNIVERSAL PNO 46203-02 WORN COMPLETELY THROUGH BUSH PNO 453-824 AND INTO BRACKET PNO 29197-02 MOUNTED ON FORWARD BULKHEAD.					
PIPER		DYNAMIC AIR	ARMATURE	WRONG PART	08/15/2001
PA31P350		313BS7	FAN	2001FA0000344	
FAN RETURNED TO MFG FOR OVERHAUL, THE FAN WAS DISASSEMBLED AND FOUND TO HAVE AN ARMATURE OF NOT MFG DESIGN. INSTALLED THE ARMATURE LAMINATIONS ARE NOT COATED, ALLOWING THE ARMATURE TO RUST. THE WINDINGS HAVE EXCESSIVE COATING WHICH CAUSED THE ARMATURE TO RUB THE BRUSH HOLDER. THIS WAS COMPENSATED BY SOMEONE REPOSITIONING THE BRUSH HOLDER FURTHER AWAY FROM THE COMMUTATOR WHICH CAUSED AN IN ACCURATE BRUSH LOAD.					
PIPER	PWA	CLEVELAND	BOLT	CRACKED	07/20/2001
PA31T	PT6A28	40106	10320400	WHEEL	CA010813014
(CAN) ON AN EVENT NR 2 INSPECTION IT WAS FOUND THAT THE RIGHT MAIN WHEEL P/N 40-106 WAS MISSING 1 THROUGH BOLT ((P/N 103.20400 (AN5-35A)) AND ANOTHER BESIDE THE MISSING BOLT BROKEN IN TWO AND PROTRUDING FORWARD THE BRAKE CALIPER. THE ROTATION OF THE WHEEL CAUSED THE HEAD OF THE BOLT TO CAUSE CONSIDERABLE DAMAGE TO THE TORQUE PLATE. (P/N 075-12800).					
PIPER	LYC	CONT	GEAR	BROKEN	08/29/2001
PA32300	IO540K1G5	BL3493704	10349234	MAGNETO/DISTRIB	AUS20010986
(AUS) LH MAGNETO FAULTY. INSPECTION FOUND THAT ONE OF THE COIL RETAINING WEDGES PNO 10-349219 WAS ADRIPT INSIDE THE CASE. THE DISTRIBUTOR GEAR PNO 10-349234 WAS FOUND TO HAVE THREE TEETH MISSING. SUSPECT WEDGE JAMMED GEAR CAUSING TEETH TO STRIP AND ALLOW THE INTERNAL TIMING TO CHANGE.					
PIPER		CABLE	BROKEN	06/26/2001	
PA32301T		62701008	SWAGED END	2001FA0000298	
DURING ANNUAL INSPECTION, FOUND LEFT AFT RUDDER CABLE TURNBUCKLE THREADED SWAGED END BROKEN AT THREADED END THAT SCREWS INTO TURNBUCKLE BARREL. SAFETY WIRE WAS ONLY THING THAT PREVENTED COMPLETE LOSS OF RUDDER CONTROL.					
PIPER	PWA	OUTFLOW	DIRTY	07/26/2001	
PA42	PT6A41	1036383	CABIN PRESSURE	CA010809018	310
(CAN) AT FLIGHT LEVEL 22000, CABIN LOST PRESSURE. AN EMERGENCY DESCENT WAS CARRIED OUT AND THE REMAINDER OF THE FLIGHT WAS NORMAL. UPON INSPECTION THE OUTFLOW VALVE WAS FOUND TO BE LOOSE AND DIRTY. THE VALVE WAS CLEANED & TIGHTENED, THEN A SATISFACTORY TEST FLIGHT WAS CARRIED OUT.					
PIPER		WIRE	BROKEN	07/26/2001	
PA44180			MLG	CA010820012	
(CAN) AS PILOT SELECTED GEAR DOWN ON APPROACH "GEAR WARNING" CCT BREAKER TRIPPED & UNSAFE LIGHT DID NOT ILLUMINATE DURING GEAR EXTENSION. PILOT NOTICED THAT HE HAD 3 GREEN LIGHTS INDICATING GEAR DOWN & LOCKED. AIRCRAFT LANDED W/O INCID.. MAINTENANCE FOUND L.H. DOWNLOCK SWITCH WITH WIRES PULLED OUT OF SWITCH BODY. DOWNLOCK SWITCHES TURN OFF GEAR WARNING SYS WHEN ALL 3 SWITCHES ARE ENGAGED. PULLED WIRES WERE SHORTING OUT & WHEN THE GEAR SELECTED DOWN BREAKER WOULD TRIP WHEN LDG GEAR RETRACTS WIRES RUB ON GEAR LEG & IF SWITCH IS INST W/O ANY SLACK IN WIRES THEY CAN BE PULLED OUT OF SWITCH. WIRES WERE WRAPPED WITH SPIRAL WRAP AND SWITCH INST WITH ENOUGH SLACK IN THE					
ROBSIN	LYC	LYC	V-BELT	TORN	09/21/2001
R22	O320B2C		A1902	FRONT ENGINE	CA011003004
(CAN) BELTS SENT TO R.H.C. FOR INVESTIGATION. THEIR RESPONSE WAS THAT THE BELTS WERE DRY AND CAUSED SMALL CRACKS IN THE RUBBER WHERE THE BELTS ARE RIDING ON THE SHEAVE.					
ROBSIN		ACTUATOR	DEFECTIVE	08/31/2001	76
R44		D2761	CLUTCH	IVSA075461	MOTOR FAILED TO
OPERATE WHEN CALLED ON TO ENGAGE M/R DRIVE BELTS. WOULD NOT OPERATE IN EITHER DIRECTION. MOTOR REPLACED, DEFECTIVE MOTOR RETURNED TO ROBINSON FOR WARRANTY CREDIT.					
ROBSIN	LYC	ROBSIN	CROSS TUBE	CHAFED	08/01/2001
R44	O540F1B5	C0148	C2411	MLG	CA010810006
(CAN) 2 CHAFED MARKS APPROX 1/16" DEEP, 3/8" APART & 1/2" LONG, MADE BY THE WIRES OF THE SEAT HOSE THAT IS ATTACHED TO THE CABIN HEATER SHROUD ON THE OUTLET SIDE. HEATER SHROUD IS NOT A TIGHT FIT TO THE MUFFLER & I HAVE IN THE PAST NOTED WEAR ON THE MUFFLER SUPPORT RINGS FOR THE SHROUD. THERE IS ROOM FOR THE SHROUD TO ROTATE UNTIL THE SEAT HOSE & CLAMP TOUCHES & WEARS THE AFT CROSS TUBE. AFT CROSS SCWZER					
TANK	CONTAMINATED	11/22/2000	700	PWA	FUEL
G164B	R985*			FUSELAGE	2001FA0000321
WATER ACCUMULATING IN FUEL TANKS WITH NO QUICK DRAINS. TT 700 TO 900 HOURS PLUS CORROSION.					
SKRSKY		SERVO	FLUCTUATES	07/18/2001	
S61N		BH185R154		ERAA074826	
INSTALLED ON A/C AND HAD TO REMOVE DUE TO GAUGE FLUCTUATING. RETURNING ON ERA REPAIR ORDER # RW -885179 REQUESTING WARRANTY REPAIR.					

SKRSKY		VALVE	MALFUNCTIONED	09/24/2001	
S76A		650852201	NR 1 ENGINE	HEEA075931	

WHEN ATTEMPTING TO DEPART, A LARGE TORQUE SPLIT OCCURRED WHEN ATTEMPTING TO PICK UP INTO A HOVER. INSPECTION OF NR 1 ENGINE BY PILOT REVEALED THE PC SAFETY VALVE PARTIALLY CLOSED. PILOT OPENED VALVE AND COMPLIED WITH POWER CHECK AND FOUND NORMAL. MAINTENANCE INSPECTED VALVE AND ENGINE. RELEASED AIRCRAFT FOR SERVICE.

SKRSKY		MODULE	INTERMITTENT	10/12/2001	
S76A	350A33200406	7665009803105	ROTOR BRAKE	HEEA076278	ROTOR BRAKE

WARNING LIGHT INTERMITTENTLY DOES NOT ILLUMINATE WITH ROTOR BRAKE ENGAGED. REPLACED WITH SERVICEABLE PART.

SKRSKY		LINK	WRONG PART	08/26/2001	
S76A			MAIN ROTOR	CA010907001	

(CAN) DURING A MAIN GEARBOX BUILDUP AND PRIOR TO INSTALLATION OF THE STATIONARY SCISSORS ASSEMBLY, THE ENGINEER NOTICED THE UPPER LINK OF STATIONARY SCISSORS WAS ASSEMBLED 180 DEGREES OUT OF POSITION. THE ENGINEER CORRECTED THIS CONDITION PRIOR TO INSTALLING THE SCISSORS ASSEMBLY ON THE MAIN GEARBOX. UNCORRECTED, THIS WOULD LIMIT THE VERTICAL MOVEMENT (DOWN) OF THE SWASHPLATE.

SKRSKY	ALLSN	SKRSKY	COUPLER	CRACKED	08/27/2001	171
S76A	250C30S	763610520104	76361040078101	TAIL ROTOR	CA010828021	

(CAN) DURING INSP OF TAIL ROTOR DRIVESHAFT ASSY IT NOTED THAT FLEX COUPLING BETWEEN INTERMEDIATE GEARBOX & NR 5 TAIL ROTOR DRIVESHAFT HAD CRACKED LAMINATE. COUPLING REMOVED & INSP. IT HAD ONE CRACKED LAMINATE (OUTTER LAMINATE OF PACK) & CRACK LOCATED BETWEEN 2 OF FLANGE ATTACHEMNT BOLT HOLES. CRACK RUNS COMPLETELY THROUGH LAMINATE IN STRAIGHT LINE FROM OUTTER EDGE TO INNER EDGE. IS NO APPARENT SURFACE DEFECT THAT WOULD APPEAR SURFACE DEFECT THAT WOULD APPEAR TO BE CAUSE IF CRACK. PART HAS BEEN SENT TO SIKORSKY A/C PRODUCT SAFETY DEPARTMENT FOR EVALUATION. SIKORSKY A/C FIELD SERVICE REPRESENTATIVE STATED THAT HAS BEEN PREVIOUS CASES OF THESE COUPLINGS CRACKING.

SOCATA	PWA	CARRIAGE	WORN	08/30/2001	1950
TBM700	PT6*	T700A575506000	LEFT FLAP IB	2001FA0000318	

AFTER REMOVAL OF LEFT FLAP, DISCOVERED LEFT INBOARD CARRIAGE, PART LISTED ABOVE AND ACTUATOR NUT COVER, PN T700A2750029000, WORN FROM CONTACT WITH ACTUATOR NUT. WEAR APPEARS TO BE FROM WORN BUSHINGS IN CARRIAGE AND ACTUATOR NUT COVER AS WELL AS WEAR IN LOCATOR PINS IN ACTUATOR NUT. FOUND SAME WEAR IN RIGHT INBOARD FLAP CARRIAGE, PN T700A5755060001 AND ACTUATOR NUT COVER COVER PN T700A2755063000 AND ACTUATOR NUT COVER PN T700A2750029000.

ZLIN	LYC	BOLT	BENT	09/10/2001	
Z242L	AEIO360A1B6	Z4243430000	ONL312014	FLAP BELLCRANK	CA010914004

(CAN) DURING A 100/500 HOUR INSPECTION THE LT FLAP BELLCRANK BOLT (P/N ONL3120.146X77) WAS FOUND TO BE BENT. THE BOLT WAS REPLACED WITH A NEW ONE. IT IS SUSPECTED THAT A STUDENT PILOT EXTENDED THE FLAPS ABOVE THE MAXIMUM SPEED ALLOWED FOR FLAP EXTENSION. THE MAINTENANCE SCHEDULE ALREADY HAS AN ADDITIONAL INSPECTION ON THE FLAP BOLTS AND THE INSTRUCTORS AND STUDENTS WERE AGAIN REMINDED OF THE PROPER PROCEDURE USING THE FLAPS.

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		OPER. Control No.		8. Comments (Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)	DISTRICT OFFICE	OPERATOR DESIGNATOR
MALFUNCTION OR DEFECT REPORT		ATA Code				
		1. A/C Reg. No. N-				
Enter pertinent data	MANUFACTURER	MODEL/SERIES	SERIAL NUMBER			
2. AIRCRAFT						
3. POWERPLANT						
4. PROPELLER						
5. SPECIFIC PART (of component) CAUSING TROUBLE						
Part Name	MFG. Model or Part No.	Serial No.	Part/Defect Location.			
6. APPLIANCE/COMPONENT (Assembly that includes part)						
Comp/App'l Name	Manufacturer	Model or Part No.	Serial Number			
Part TT	Part TSO	Part Condition	7. Date Sub.	Optional Information:		
				Check a box below, if this report is related to an aircraft		
				<input type="checkbox"/> Accident; Date _____ <input type="checkbox"/> Incident; Date _____		
				REP. STA.	OPER.	
				MECH.	AIR TAXI	
				MFG.	FAA	
				COMPUTER	OTHER	
				SUBMITTED BY: _____		
				TELEPHONE NUMBER: () _____		

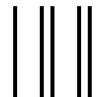
FAA Form 8010-4 (10-92) SUPERSEDES PREVIOUS EDITIONS

Use this space for continuation of Block 8 (if required).

U.S. Department
of Transportation
**Federal Aviation
Administration**

Flight Standards Service
Designee Standardization Branch
P.O. Box 25082
Oklahoma City, OK 73125-5029
AFS-640

Official Business
Penalty for Private Use \$300



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 12438 WASHINGTON, D.C.

**Federal Aviation Administration
AFS-640 (Alerts)
P.O. Box 25082
Oklahoma City, OK 73125-5029**

